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DETERMINISM AND ETHICS.

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I.—Ethics, Positive or Normative.

In maintaining that human behaviour is naturally conditioned, that there is no difference between the kind of causality which conduct exhibits and that exhibited in any other case, determinism implies that the distinctions commonly drawn between normative and positive science, and between freedom and necessity, are unreal. This is not to say, as is sometimes supposed, either that we can have such a knowledge of a person's character and environment as will enable us to predict his whole history, or that his environment alone determines what his history will be. It would be absurd to make any such claim in regard to minds, when we find, in dealing with other things, that both character and environment have to be taken into account—indeed, if this were not so, we should have in turn to consider the environment, and not the character, of the environing things, and so on indefinitely—and that, in the investigation of both, new and unexpected factors are continually being revealed. Such discovery, however, is possible only if we can say that in certain situations things of a particular sort behave in a certain way; and this kind of description, which implies neither "freedom" nor subordination to "standards," is the only way of expressing knowledge of human or any other behaviour. It is no more possible to uphold a theory of different kinds of causality than consistently to believe in different kinds of truth or reality.

Those who distinguish positive from normative science contend that, while the former can tell us "what is," it cannot tell us "what ought to be." In order to know that, we require to invoke "norms"; standards or ideals to which things may conform more or less closely, but which are in some sense *above* these things. Such norms, it is said, appear in practice, where we must have ends to which our actions are directed. And while natural science can tell us as much about the connections of things as will enable us to select means to ends, it cannot determine the ends themselves. It supplies us, not with the absolute or categorical commands of morality, but only with hypothetical commands. Medical science, for example, can say that if we desire health, we should not deprive ourselves of fresh air, but we have to go beyond medical science to find out whether health *ought* to be desired. Now action which is determined by pursuit of an absolute end is thereby subject to a different sort of causality from that which prevails among things which have not ends; it is "free" action.

The illogicality of this theory appears at once from its conception of the different sorts of reality which attach to norms and to the things which come under these norms, or from its attempt to distinguish values from facts. If the statement that something "ought to be" has any meaning, it can only be that the thing *is*, positively, obligatory; that this is a matter of fact. When such a statement is taken to be true, it can be dealt with by means of the ordinary logical mechanism of assertion and denial, proof and testing of hypotheses, definition and division—and in no other way. If we accept the term "obligatory," then we shall say that certain things are or are not obligatory, just as we may say that they are or are not red. But if we set out to show that they "are" in different senses, we can do so only by using propositions in relation to which an exactly similar operation will be required. The consequent impossibility of making any definite assertion would be fatal to *any* science, "normative" or positive.

To get over this difficulty it has been suggested that all science is really normative, that "physical science" is only that part of Science which deals with means, and is thus a mere abstraction from the fundamental consideration of ends. But how is this abstraction possible? Suppose it were granted that medical science deals with means (a fairly plausible assumption), what are they, and how can it deal with them so as to be of any use to us in conduct? They must have characters of their own, they must exist, or they cannot be studied. And, however strenuously it may be asserted that in this existence they are only "relative," it must be admitted that they *absolutely* lead to the desired ends, if we are to get any advantage from knowing them. And, finally, this end that they lead to must have certain physical characteristics, if physical science is to tell us how to get to it. It appears, then, that medical and ethical science may consider the same things, but will concentrate on different features of them. This is a commonplace of scientific investigation, and does not justify the attempt to take those features, in which ethics is specially interested, apart from the rest, and as an end to which the rest are a means. Incidentally, we should then have two sorts of "means to end" relation; fresh air would promote health in quite a different way from that in which health promoted goodness. Yet both relations would be determined in exactly the same way—by seeing what *followed* from certain conditions.

To avoid these inconsistencies we must maintain that it is possible to find physical occurrences without moral characteristics, and also to find physical occurrences with moral characteristics—which, of course, need have nothing to do with ends. If the value of anything were something *above* its occurrence, it would be unaffected by whether the thing occurred or not, and thus the occurrence itself would have no value, *i.e.*, the value would not, strictly speaking, be *of* anything, and, being quite apart from events, certainly could not be chosen as an end. On the other hand, if there is anything in the occurrence itself which could be regarded as its "conformity to a standard," then this character is what we mean by the thing's value and we do not require to look beyond the thing itself in order to know an ethical truth. The alternative is that value is a mere label which might be arbitrarily attached to anything.

It will, of course, be said that nothing ever happens which quite comes up to our ideals. But, in the first place, this comparison could not be made unless our ideals were at least *thought of* as happening, *i.e.*, as natural. And while we can and do think of goods which may occur in the future, the same applies to the subject-matter of any science. There is nothing *logically* peculiar about the future; what we think of as existing then, we think of as existing in the same sense as what exists now. And the characters we attribute to future occurrences are those which we have already found in similar occurrences. Allowing, then, that we can suppose that something better will exist than anything that has so far existed, we conceive its *goodness* to be of the same sort as that of things already in existence. But, in the second place, suppositions of this kind are for the most part false and useless; the imagined situation would very often not be particularly good; and if we say "better but not possible," either we mean that it is not possible here but has occurred somewhere else and been observed to be better, or we are speaking about the non-existent and cannot significantly call "it" better or worse than what exists.

II.—THE "MORAL JUDGMENT."

This general position is not affected by the conception of ethics as the science of moral *judgments;* on the contrary, it shows that that conception is wrong. The suggestion is that the data of ethics are acts of approval or preferences, and that, while it is possible to deal positively with the conditions under which we come to approve of this or that, there remains the question of the "validity" of our approval, a question which cannot be treated in the same positive fashion. But when we consider what is meant by validity in this case, we find that it simply means the *truth* of the judgments we pass. Now, admittedly, the truth of a belief is a different matter from how we come to hold it, but the one question is just as positive as the other. In a moral judgment, as in any other, something is judged or asserted, *i.e.*, some situation is said to have occurred; and moral judgments can be distinguished from others only in virtue of some peculiarity of these situations, such that we can describe them as *moral* situations. It would be absurd to say that, although such situations are asserted, ethics cannot take account of them but must begin with our approval; apart from them it would be impossible to say what "our approval" meant. No one but the most recalcitrant relativist would dream of saying that the data of physics are "physical judgments," instead of physical facts; yet the one view is as reasonable as the other.

If, then, we all pass moral judgments, this means that we all suppose that there are moral facts, which, naturally, are the data of ethics. And if any such judgment is to be criticized, this must be done by means of other judgments of a similar kind, *i.e.*, by showing that the supposed situation contradicts the true moral facts; otherwise we have a mere *argumentum ad hominem*. It is just through this sort of confusion between our attitudes to things and their own characters, that it has been supposed that ethics has to do with ends. It is possible for us to pursue something which is good, but this could not be significantly said if goodness meant being pursued, or even being worthy to be pursued, by us. How we are affected by good things, and likewise how we know them, are questions which, though a moralist may be interested in them, cannot constitute ethical inquiry. Statements such as "This is good" are made, and they must be met or supported in just such ways as would be employed in dealing with the statement "This is sulphur." G. E. Moore's theory of "intuition" simply amounts to saying that we find certain ethical propositions to be true; this does not mean, as is evident from other such findings, that they cannot be logically criticized or proved. Intuition, then, means observation, the direct acquisition of positive knowledge, allowing, of course, that people are as apt to make mistakes about moral facts as about physical facts in general.

The illogicality of the theory of the "moral judgment" becomes still clearer if we consider the detailed accounts that are given of approval of the right things, and consequent or concomitant pursuit of the true end. The passing of moral judgments is supposed to be the work of some peculiar faculty or mental power, which approves or disapproves of the ends chosen by other faculties or powers. The more rationalistic form of this theory is that there is a special moral faculty, conscience or sense of obligation, which issues its edicts, while particular inclinations or reflective faculties (like Butler's "self-love") engage in the pursuit of ends which may or may not be in accordance with these edicts. Taking the more idealistic view, we have to think of the whole self as pursuing an ultimate end ("self-realization") in relation to which alone any special end is to be approved or even understood. In the latter case we have a more definite conception of control on the part of the central power; but even in the former case we can hardly think of approval as going on in the same mind without any effect on actual choice. So that while there is a *prima facie* distinction between the theory of a difference of kind between the approving faculty and the pursuing faculties, and that of a difference of degree between the whole self pursuing the good and functions of the self pursuing aspects or elements of the good, there is in both cases a conception of an ultimate judge and of subordinate functions which it criticizes. Thus if we can rule out the supposition of a peculiarly *critical* faculty, we shall have disposed of both "conscience" and the "whole self" as candidates for that office.

Now I have no desire to deny that judgments are passed in the course of our activities and pursuits, of which they may even be said to be expressions. But it does not follow that these judgments are about the activities themselves, or that, since we judge in choosing, our judgment must take any such form as "I am choosing what I ought to choose," or, by generalization, "This ought to be chosen by anyone similarly situated." There is nothing whatever, in the fact that we find things out in the course of our pursuits, to show that we find out anything about our pursuits, let alone that they have "norms"; and although in our active life we sometimes discover moral truths, we also discover other truths, in which, for the most part, we are much more interested.

The position is that a *motive* (*i.e.*, whatever it is in us that acts; feelings, as I should contend) tends to bring about some state of affairs, or *objective*, and that, if it is not obstructed in its action, we believe (or, as I should say, the motive believes) that that state of affairs has occurred, *i.e.*, a certain *proposition* is held to be true. If this terminology of motives and objectives be adopted, the position that I am criticizing is that there is a peculiarly critical motive which judges all other motives by comparing their objectives with its, or that there is a total motive which dominates all partial motives by subordinating their objectives to its; the ultimate objective in both cases being "the good." (Of course, by confusion between what a mental activity is and what it knows, the objective is wrongly called the motive, in many theories.) Whether " the good " is conceived as an abstract or as a concrete universal, the criticism of the theory of an ultimate objective and a fundamental motive is not greatly affected ; and, as has been indicated, the two theories do not remain so distinct as they set out to be. They are simply different ways of trying to meet the difficulties involved in setting up a moral *authority*.

The fundamental objection to any theory which distinguishes a universal motive seeking a universal objective from particular motives seeking particular objectives is that all motives and objectives are particular. What we seek can only be some state of affairs. To call it a norm or an ideal is merely an excuse for leaving it indefinite. And, in the same way, aiming at the norm would have to be as much the work of an *inclination* as is sport or drunkenness. The ideal, if it is to be capable of being stated and thought about, must be specific, and thus that which pursues it will be only a part or " aspect " of the self. In short, the notion of a total or supreme good is incompatible with the recognition of ethical propositions, *i.e.*, of situations in which good occurs.

The distinction between conscience and inclinations, as worked out, for example, by Butler, comes to something like this. An inclination pursues a certain thing, and it will pursue this thing irrespective of whether it is good or not ; it is incapable of exercising criticism or judgment, since it has a " particular " aim. Conscience, on the other hand, works by means of judgment ; it directs pursuit of things *because they are good ;* or, judging that a thing is good—a proposition—it approves the inclination that pursues that thing—simply as a thing. But there is no logical distinction between things and propositions. Things are known only by their characters, and so the objective in each case is a complex situation, not any " simple " entity. Hence, any motive that can seek, can judge ; and the reverse also holds, each motive being interested in situations of a certain sort. Our object-seeking activities (passions or inclinations) govern our judgments ; and there is no logical basis for supposing the existence of a non-passionate judge or " rational " faculty, over and above our activities themselves, which is peculiarly critical of them, or to which they should be referred. The fact that judgments are made by passions does not mean, as already indicated, that they are *about* passions, and it does not mean that they are false. They can be shown to be false only by having other judgments, equally definite, brought against them.

It is, indeed, to be observed that there could be no conflict between conscience and inclinations, if their objectives were of different orders. But if all objectives are of the propositional order, having both particularity and universality in that a certain thing is taken to be of a certain sort, then we can have contradiction and conflict. In fact we can connect the interaction, the mutual opposition or support, of motives with the similar relations between the propositions which are believed. That is, we can explain reasoning without calling in "reason." This reason, which is supposed to guide our activities or to subsume them in itself, is in a quite untenable position. For the guiding or subsuming is surely an activity of ours. So that either we have activities which reason cannot control, or it will guide its own guiding, subsume its own subsuming—and so on.

Criticism, then, is not a special function, but can be undertaken by any motives that can conflict. It is not only in *moral* science, as the history of rationalist thought amply shows, that the attempt has been made to set up authoritative principles. But, when we consider the actual procedure of science, we find that there is no such thing as abstract criticism, but only criticism in terms of certain tenets. Thus what we currently mean by "reasonable" is not transcending particularity but conforming to certain specific standards, *viz.*, to the objectives of the motives which speak as "we" at a given time. And as reasonable means assisting, or at least not hindering, these objectives, unreasonable means obstructing or conflicting with them. The dominant motives are as particular as the subordinate ones, and it is easily seen from the facts of everyday life that it is not always the same motive that criticizes. The attempt to get round these facts by means of the notion of a *developing* conscience or self makes the fatal admission that the motive in question *is* a particular one. Actually, then, we find that our motives change and that different motives are dominant at different times. And the theory of a moral authority is simply an attempt to induce conformity to the motives dominant in certain minds, by elevating them to a transempirical level. This attempt owes some of its success to the tendency to seek safety and certainty, which is also, of course, a particular motive with a definite history.

III.—THE FACTS OF THE "MORAL LIFE."

The above criticism of the normative or authoritarian theory shows to some extent what account a positive theory will give of what are called the facts of the moral life, but some further statement and clarification of the positive issues is required. The facts referred to are most specifically those of choice, deliberation, responsibility and exhortation, or, more generally, inducement, to goodness. And, as already indicated, the consideration of them must be based on the fact that we and others have various motives, and that these motives interact and influence one another in a variety of ways.

Simple choice is simply object-finding, *i.e.*, the finding by a motive of an object whereby it gains outlet or expression. This is the process of satisfaction of desire. We are to think of the motive as being in a state of tension, which ceases when the object is achieved. This is the condition of knowledge in general; what we know is what solves our problems or eases our minds. But the case is not always so simple; there may be no immediate solution, and we may go through a process of *deliberation*, which is regarded as the distinguishing-mark of "moral" choice. Now deliberation arises from a certain opposition of motives. And these opposed motives, in struggling to find outlet, excite other motives which assist them, until one set overcomes the other and acts.[1] Or, again, certain parts of the opposed motives may find common outlet, while other parts are repressed. In either case we have the opposition of two complex tendencies, and a final movement arising from some solution of the opposition. The situation is comparable to that represented by a chemical equation, where the interaction of two compounds results in the formation of a new substance and, in general, of a certain "residue." (This, incidentally, is the true "mental chemistry," and not any theory of derivation from elements.) The various "ideas" called up in the course of deliberation are the objectives of the motives that rise to the assistance of the original motives, but it is these motives themselves, in conjunction with the original ones, that enable a certain action to take place; the "ideas" are not in any sense causes of the action. Deliberation, then, exemplifies the conflict and the complication of motives in the course of human activity. There is no pure reason here, no total self or ultimate end.

In exhortation and inducement we have a similar situation, where some of the conflicting and assisting motives are in one mind and some in another. It may, of course, be said that the motives of the one person cause some of the other's motives to become active, and that the latter then goes through a process of deliberation, the point of difference from the previous case being that he has been *induced* to deliberate. But even this explanation admits of interaction between different persons' motives as well as among a single person's. The general position is, then, that we wish another person to act in a certain way, which we may or may not call "good." And apart from the possibility of our seeking to show our power over him, the point will be that the objective we prescribe for him is one of our own, that it satisfies one of our motives. Now what we appeal to or exert influence on in him may be the same motive, so that our action consists in producing a situation in which it is free to act; the conveying of information being a case in point. Or it may be a different motive, in which case we may procure conformity but not the same sort of act as we should perform in pursuing the objective in question. And thus his objective is also different (for example, he may be seeking to avoid unpleasantness), though similar to ours in certain respects. Appeals to persons to be moral in their own interests illustrate this confusion of motives.

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[1] This view was largely suggested to me by S. Alexander's "Foundations and Sketch Plan of a Conational Psychology," *British Journal of Psychology*, December, 1911 (*cf.* especially pp. 256-257). Other parts of my argument have also been influenced by his views.

The two extremes, then, between which all types of exhortation and inducement are to be found are compulsion and assistance between similar motives in different persons. Accepting McDougall's theory, in respect of the latter, that the activity of a given motive in one person may "sympathetically induce" the operation of the same motive in another, we have to add that this may happen not merely when the motive is dormant or has been temporarily overcome by other motives, but also when it has not previously been active; so that all the varieties of education are accounted for. But it has particularly to be noted that this theory applies to motives of any sort. We have not discovered any method of inducement peculiar to good motives; though it may be maintained that in all other cases there is an element of compulsion. However this may be, it has been found possible to give a positive description of the processes without taking goodness into account, and it remains possible that goodness may be discovered as a positive feature of some of them.

All these methods of influence are likewise to be found in operation among the different motives of a single mind. It is on this basis that a positive account of responsibility is to be given. Responsibility is not the charge that is put upon reason to control inclinations, or on the self to be itself. It is the fact that all our actions arise from motives which we have, and which are in some interactive relation with the motives speaking as "we," even when they are disclaimed by the latter. Of course, they interact with all sorts of things, including other people's minds. But they are in peculiar relations to the other processes which belong to the same mind. Now clearly, if we avoid the confusion between what a thing is and what it knows, we cannot accept the statement, "I did not know I was doing this," as a justification for the conclusion, "It was not I who did this." To put it otherwise, our motives are complex, and so are our objectives; so that what we vaguely or indirectly pursue has to be taken along with what we directly and definitely pursue; we are equally responsible for both. "Repression" is characteristic of the refusal to accept responsibility; it is the forcing of a motive to find an outlet which "we," the repressing motives, will not observe. But recognition by us cannot be the test of responsibility; we should, in fact, commonly be said to be responsible for this recognition itself, though we might not recognize *it*. So that the term "responsibility" really stands for such relations as hold between any two activities of one mind.

Similarly, we may speak of effort or endeavour, without requiring to add anything about its being "moral," as characteristic of a motive struggling against obstructions. We have, in short, to think of our motives as striving to find outlet, of various *tendencies* in mind. But this is just as positive a conception as pressure in physics. The main point is the treatment of our various motives as "passions" (that is, as having qualities of their own and not merely relations) and as complex, as opposed to the theory of a variety of simple inclinations which cannot undergo mixture and separation, but pursue different individual objects, and of simple reason which can control them all because it has a universal and single aim, "the good." In place of this scheme of an "identity-motive" and "difference-motives," actual experience presents us with differentiation and integration, variation and adjustment, complication and development. In brief, *the interaction of complex motives* will account for all the facts of "moral psychology."

IV.—GOOD AND BAD ACTIVITIES.

If we take the facts which have been considered as constituting the field of ethics, it will appear that the logic of moral events is the same as that of any other events. But even if moral theory has something further to consider than the facts referred to, the natural assumption, in view of what has been said, will be that it differs from psychological theory, not in method, but only in paying special attention to certain things. This will be obviously so, if we find that goodness is a character of certain motives or mental activities. These will be the special object of ethical study, and it will be primarily concerned with what these are and what characters they display, and only subsequently with how they are produced or hindered. It has been shown that there is no room for the assumption of some ideal to which deliberation and inducement lead on, since these processes simply indicate the interaction of specific motives having specific objectives.

The crucial question is whether it is objectives or motives that are to be regarded as good or bad. Now those who take the former view always regard the goodness or badness of objectives as connected with our pursuit of them. It would thus appear that the terms correspond to the arbitrary "reasonable" and "unreasonable" that we have already considered. The question of the character of the objectives themselves will be the important one. Now some objectives are mental and some are not, but it is commonly supposed that goodness and badness have some special connection with mind. It appears to me that objectives are generally called "good" only by confusion with the goodness of the motives which pursue them. Thus the facts which induce Moore to call *beauty* good and many thinkers to say the same of *truth*, seem to me to be accounted for by taking the love of beauty and the love of truth as good. And the unjustified assumption that what a motive pursues must be felt to be better than it, explains these errors. I consider, therefore, that it is the operations of certain motives that are properly called good or bad. By taking this view we are in a position to avoid the ethical dualism of many theories, in which "goodness" is attributed alike to motives and to objectives, but really in different senses. And we are prepared to find that what goods aim at is ethically much more important than what aims at them.

In speaking of the operation of a motive, we require to make a distinction. We may think of its activity as what has been described as "finding outlet," a release of tension taking place when some object is achieved. Or we may consider it as active, when it is not in a state of tension, but is simply occurring within the mind; contributing, in the current terminology, to "feeling-tone." It may be that there is always some degree of tension, if the motive is present at all, and that at other times we simply have a tendency, *i.e.*, that the processes then present in the mind are of such a character that, when certain circumstances arise, the motive will again appear. In any case it would seem that it is when they are in a state of tension that motives assist or resist one another, and also that it is in such cases of intense activity that goodness is to be found. Taking assistance, then, as meaning that a certain motive brings about circumstances in which another will act, resistance that it brings about circumstances which prevent another from acting, and recognizing that these relations are facts of experience, we may consider the view that assistance is a mark of good motives, and resistance of bad motives.

This is substantially the view put forward by Socrates in *Republic*, I. He makes it clear, of course, that this distinction is not to be taken as a simple and final criterion, by pointing out that, while goods assist one another, they oppose bads; whereas bads oppose both goods and one another. There is no question, then, of founding ethics on abstract attitudes of assistance and resistance (although, as Socrates develops the argument, this point is considerably obscured), any more than on abstract attitudes of altruism and egoism. The position may be expressed by saying that a good motive will always assist another of the same kind, so that that particular good can be communicated to an indefinite extent within the field of human activities. Love of truth, for example, will indefinitely communicate the spirit of discovery, and will assist the development and operation of that spirit wherever it appears and with whatever materials it may deal; a true investigator in any field will always encourage investigation in that or any other field. We do not, of course, *define* goodness by means of that relation, but if we decide, as I think we may, that it is common and peculiar to goods, then we can employ it as a criterion in particular cases. The same facts will show that a good motive will sustain itself in a particular mind by providing the materials for its continued operation, as one discovery leads on to another and the solution of one problem to the formulation of a new problem.

Bad motives, on the other hand, can never get rid of an element of resistance and repression, and, though they may co-operate to a certain limited extent, will eventually be found in opposition, and will always involve a certain friction. Hate, it may be said, breeds hate; but it also fights with hate and tries to destroy it, and in the individual it exhausts itself. So ignorance, though it may breed ignorance, fights with ignorance, and obscurantism defeats its own end. The degree of co-operation possible to motives which are not good is represented in the State sketched by Glaucon in *Republic*, II. Here the assistance is of an external or extrinsic sort, the utilization of common means to diverse ends, as contrasted with participation in common activities in which the distinction between means and ends is unimportant. We note in the compromise referred to (which is, of course, a fact of common experience) the absence of a common spirit and the recurrence of friction, and also, as Glaucon points out, the element of repression in that some demands are given up in order that others may have a *sure* satisfaction.

That such a state of affairs occurs is not to say that it is not bad. On the other hand, though we may never find a mind or a community which is wholly free from resistance and repression, which, as we say, is "given up" to good activities, this will not prevent us from recognizing particular goods and the assistance among them. This assistance, along with the opposition between evils, is no ground for optimism. We have to take account of the conditions of the original appearance of goods and evils, we have to remember that "it is hard to *become* good," and that it is possible for goods to be simply annihilated by evils or by natural conditions generally. But the fact that a good once established both communicates itself and assists other goods, as scientific discovery assists artistic appreciation and creation, is not merely a reason for the continuance of the struggle against evils; it is itself the continuance of the struggle.

We may further illustrate the operation of assistance by reference to the process described by Freud as "transference." Freud is referring primarily to "pathological" cases, but we may consider the matter more broadly. What occurs in transference is that one person, *e.g.*, the patient, makes use of the powers of mind of another person, *e.g.*, the analyst; "identifies" himself with the latter, adopts his views and his ways of dealing with situations. In this way the patient's previously pent-up motives find outlet. But the same may take place within one person's mind, when a conflict is resolved and a new type of activity emerges by the aid of certain abiding motives or sentiments. This is the process of "sublimation," where one motive finds for another a means of expression, provides it with a language, puts its own "ideas" before it as objectives. This is also the process of education. It may be argued, then, that all good motives have this power of transference or conversion, whereby from hitherto dissociated material a new motive is formed which can co-operate with the good motive. Goodness is associative, evil is dissociative; goods have a common language, evils have not. And since, where there is division, each of the opposing forces finds some sort of outlet, it is just under such conditions that we get dualistic ethical systems, like that of "natural" and "moral" good, interest and duty.

V.—THE FRAUD OF MORALISM.

Accepting this view, we should regard "obligation" as signifying not merely a false theory of ethics, but also evil motives. Moralism, the doctrine of conscience and "moral necessity," exemplifies the natural causality of repressing motives. There *are* acts which are performed under a sense of obligation, but what they exhibit is not communication but compulsion. Freud has informed us of the elaborate performances which compulsion-neurotics feel bound to go through. They are simply "the thing to do"; they are "right" but not good, forced, not spontaneous. The spontaneous action of a motive seeking its objective cannot be induced by compulsion. Compulsion can only induce conformity. And the motives which will incline a man to conform, to do a thing because he is obliged, are, speaking generally, fear and that desire for self-abasement which, in sexual theory, is called "masochism."

The development of motives has been traced to action in the same or in another person's mind. *Good* motives may be said more specifically to arise through sympathetic induction, or through the spontaneous development of a person's natural capacities. There are certain good motives which we do not expect to find in children, and which appear "as they grow older." That is to say, they are not definitely results of education, except in so far as the child may be said to educate himself. But it is for the most part impossible to lay down exact limits of the operation of these two factors; each may be taken to operate in some degree in the development of all good motives. Compulsion, on the other hand, has no part in this process, except as one of the *obstructions* by reaction against which capacities may develop.

It may be said, then, that the appeal addressed to a person in terms of obligation is either unnecessary, since, if he has the appropriate motive, it will require no external inducement to seek its objective, or useless, since, if he has not the motive, the type of action produced must differ from that commanded. However it may appear to the moralizer, his appeals are prompted by particular motives in his own mind and take effect on particular motives in the other person's mind. It has been admitted that, by means of assistance and transference, new motives may be generated, but this is through natural operations on the motives already present. When one person has interrelated activities A, B and C, and lives in intimate relation with a person who has the activities A and B, the latter will develop C, if he is capable of doing so. In all these cases we have perfectly natural action, moralistic or obligatory action being one particular case. But, since people have different capacities, there is no question of laying down rules for men. The only practical question is what goods a particular person can realize, what good motives can be induced in him. This induction or communication does not require to be commanded, since good motives *will* persistently communicate themselves; and, similarly, response cannot be commanded.

We see, then, how a positive ethics is possible; we see that motives act in accordance with their nature, that communication occurs, and that the study of communicating and non-communicating motives must be thoroughly deterministic. Vague notions of ideals are simply covers for that domination which is the real object of the exponents of "the moral law." The safeguarding of morality, the discovery of "incentives" to goodness, are, as expressions of ethical dualism or "heteronomy," unscientific, and, as repressive operations, bad.

There is, in fact, no moral safeguard. Goodness is *supported* by those good activities already in existence, which encourage the development of other good activities. But in so doing they meet with obstructions, and there is nothing in the nature of things to show that good will overcome evil.

Why, then, should we be moral? What inducement to goodness have we? None, except those good motives which we possess and which operate naturally in relation to circumstances—which, of course, they, like all other things, are capable of altering. The ends, by which they are supposed to be dominated, are what they know about their surroundings, and, knowing, affect. The theory of "ideals," like that of "ideas," rests on failure to observe that what we are commonly said to "have in mind" in any situation is some external fact, and that what we really have in mind are certain motives which act "automatically"; and that the interaction of our motives with one another and with outside things is what determines all our actions and whether good or evil will come about.

It is particularly to be noted that the motive which leads us to have an ethical theory is not of primary importance to the discussion of ethical theory. We may certainly consider whether a motive of this kind is good or not, but this implies a direct consideration of good and bad situations. And, in considering the good activities of a person, we are not bound to consider whether he has an ethical theory or not. People in general do not think very much about the goodness of their activities. They are simply to be found trying to make discoveries or to produce works of art, exhibiting love or courage, or, on the other hand, imposing obligations on themselves or others, because they are made that way, *i.e.*, because their character, in relation to their history, has so developed. And these are the conditions, and not any metaphysical "freedom," on which, if at all, further development is possible.

CHRISTIANITY: THE RELIGION OF JESUS OF NAZARETH.

By F. E. Brown, M.A.

A. The Problem of Definition: Religion and Language.
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THE briefest glance at the history of religious institutions is enough to show that the definition of religion is beset with many almost insurmountable difficulties. Many of these difficulties are due merely to the inadequacy of language; for religion is always far more than theology or philosophy, and life can never be reduced to theory. Strictly speaking, definition of a living thing is impossible, for it is bound to break through the defining categories and escape the grasp of the intellect. It may be questioned, indeed, whether it is the function of the intellect to explain life in its detailed fullness. It is more likely that the intellect is an instrument evolved along with the rest of the equipment of the human mind for the practical work of guiding the feelings and the will in ways that may prove advantageous to the life of the individual; and, if this is so, a little scepticism is not out of place when any intellectual formulation is put forward as a final statement of the truth.

This is not to say, however, that the intellect cannot be trusted at all. On the contrary, it is absolutely necessary to trust the intellect as far as it will go, if religion is to be possible in its full sense. Religion is the functioning of the whole man, his attitude to life; and it therefore includes the use he makes of his intellect. He may deny that his intellect can penetrate any of the secrets of life; but in order to do so he has to make use of his intellect; he can only express his distrust in the intellect by trusting that his intellect is telling the truth when it tells him that it cannot be trusted. The only course open for a reasonable person is to think as clearly as he can. Even though definition may be impossible, there is no excuse for his refusing to think as definitely as possible.

The task before us, therefore, is to reach as definite an idea as we can find of the essential nature of Christianity; that is to say, to find language which will make the essential nature of Christianity intelligible to another person.

At this point, however, we are met with the difficulty caused by the great differences between individuals due to educational and cultural backgrounds. A definition which will be intelligible to one person will possibly be unintelligible to another, even though they both may seem to speak the same language. A term which means one thing to one person may have a quite different meaning, or perhaps no meaning at all, to another. It must follow, therefore, that anyone attempting to define Christianity will find it necessary to have in mind a certain type of reader to whom he expects his terms to be intelligible. As it is difficult to find a language which is intelligible to everybody at once, a writer may perhaps be forgiven if he uses language which is unintelligible to some of his readers, so long as it *is* intelligible to others, especially if those to whom it is intelligible find the common language of religious people quite unintelligible. If religious writers always put intelligibility before dogmatism, we might hope that soon a religious language might be evolved that would be intelligible to all religious people; if we desired the affection of our brethren rather than that they should conform to our ways of thought, we might more quickly learn the common language of neighbourliness.

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It has been claimed that the understanding of Christianity is impossible without a study of the history of the Christian church. This is obviously true if by Christianity is meant the religion of those people who are known to the world as Christians; it is self-evident that the religion of the Christian church, as it is today, cannot be understood apart from its historical development. But is this the same thing as saying that Christianity cannot be understood apart from the Christian church? The answer to this question is, of course, dependent upon the answer to the previous question: "What is the essence of Christianity?" But at least it may be said that a non-Christian is perfectly justified when he claims to judge Christianity by the lives of Christians. We are not confined, however, to this line of inquiry in order to reach the heart of Christianity. It is admitted on all hands that Christianity had a definite historical origin, and it is possible to inquire at the original source without troubling about the subsequent history. Indeed, it is because so many people are inquiring at the origin that the view is gaining ground that the history of the Christian church is "the most melancholy journey open to the mind of man." As in the case of all religions, there has been so great a discrepancy between the life of the founder and the lives of his followers that men are insisting on the necessity of going back to the pure source in order to make, if possible, a fresh start. While this investigation of sources is really historical research, it is sometimes given a name which allies it with the science of biology. As a result of the use made in Sociology of the conception of Society as an organism, the inquiry into sources of social institutions has commonly been named after Genetics.

The Genetic method of inquiry into origins may be either historical or psychological, objective or subjective. The historical genesis of Christianity was in the life of Jesus of Nazareth; the psychological genesis of Christianity is in the awakening in the individual of the life which is known as Christian. In an age dominated by the idea of objectivity in science the former tends to be considered as far more reliable than the latter; it is said that to follow the subjective method is to rely on private judgment alone, and it is taken for granted that private judgment, *ipso facto*, is untrustworthy. The result is that apologists for Christianity bend their minds to the task of clarifying the historic figure of Jesus, in order to supply a solid basis for Christian faith in an age when all foundations of thought are exposed to critical inquiry. The outcome of this historical inquiry into the origin of Christianity is that the figure of Jesus of Nazareth is much clearer than it has ever been before (at any rate since the first century of the era we name after him); but there is still room for great differences of opinion regarding the details both of the life and teaching of Jesus. Even when a certain degree of clarity is achieved concerning a reported saying, there are always possibilities of wide divergence in the interpretation of it. If Christianity is to be delivered from such uncertainty, it will need to find a surer basis than the evidence of ancient documents and questionable history.

But it will be said that there is no more certain basis to be found anywhere. Especially will the scientist be disposed to deny that there is any ground for certainty in such things; the most he will be disposed to grant is that there may be a high degree of probability about them. How can we be sure that Christianity is true, when there are so many doubtful things about its origin and history? What right has the religious man to be certain about anything, since science has laid claim to the whole of life as something to be explained rather than taken for granted? We are here faced with the whole problem of knowledge, since modern science has been teaching people to think of knowledge in a sense which would seem to rule out much of what the religious man considers to be most real in his experience. The religious man says that he is certain that God has saved him from sin, for example; and the scientist asks him how he knows. Probably the only answer open to the religious man will be reducible to the plain statement that he is certain of it. This will probably not satisfy the scientist because it does not meet his demand for explanation in terms of cause and effect; and yet the religious man may really have had an experience which is as yet beyond the reach of the scientist's methods.

This issue, which is at the root of much controversy between religious men and scientists, can only be solved through a recognition of the subjective world as no less real than the objective. In the act of knowledge science is aware of a relation between a knowing subject and a known object, but it ignores the subject and pays attention to the object alone. Religion is concerned mainly with experience from the standpoint of the subject of it, that is, from the inner point of view rather than the outer or objective point of view. Moreover, this subjective aspect of experience is no more illusory than the objective; indeed, it is less so, for, while the whole world of objects may be conceived to be illusory, the existence of the conscious subject cannot so easily be doubted. There is no need for the religious man to be scared by the scientific use of terms like "auto-suggestion" and "subjective deception"; the point too often missed by science is that the self which does the suggesting or deceiving is beyond the reach of scientific theory.

The approach to Christianity which begins with the consciousness of the self as being in some kind of relation to an objective world is therefore a sound one, and science (or pseudo-science) has no right to say it is unsound.

Having begun with the consciousness of the self, however, there is no reason why one should stop there. For the full understanding of this subjective experience, much light may be borrowed from the history of religious experience. Indeed, when the subject has entered into a new religious experience, he begins to see a new significance and value in the recorded experiences of others. The story of the life and teaching of Jesus, above all, grows in meaning for him as he goes through crises and situations which test his manhood, and he begins to investigate more closely the records of that life in order that he may have more light by which to see his own way along the road of life. The historical approach is therefore an important auxiliary to the subjective, but is no substitute for it. The old test still holds; if one would understood and evaluate Christianity, one must try it to see what difference it makes to life.

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It is frequently said that because religion has become more ethical as it has developed in history it is destined to give way to ethics altogether; and the usual reason given for this view is that, since religion is apparently dependent upon some Cosmic Power and man is becoming more and more independent of such things, the time must come when all reference to superhuman beings will be unnecessary. But the assumption that religion is different from ethics in that it is dependent upon a Cosmic Power seems to ignore the fact that morality is just as dependent upon cosmic laws as any other activity of the human spirit; and it arises from a confusion between convention and custom on the one hand and morality or ethics on the other. A conventional " morality " based upon conformity to certain social standards may not seem to be dependent upon anything outside or beyond the community, but it may be questioned whether such conventionality deserves the name of morality. True morality must involve progress; we cannot remain at any stage of moral achievement without degenerating. The ideal presses on ahead of achievement and " bids nor sit nor stand but go ! " Such morality is out of the question apart from an ideal which transcends the actual, and upon this ideal (or Cosmic Power) the moral man depends for his morality. It is not because ethics is not dependent upon a Cosmic Power that it differs from religion, therefore. The difference is to be found in the fact that religion concerns the whole man, while ethics is concerned with his conduct alone. One cannot be religious without being moral, but mere morality is not religion.

The same is true of the relation between religion and philosophy, if the latter is thought of as being concerned primarily with the logical inquiry into the true meaning of things. As this is the work of the intellect, which is but one of the aspects of the mind, it is clear that it is something less than religion. The search for truth (whether it be called philosophy or science) is an essential part of a man's religion; but it is only a part. Clear thought is essential to the fullest and highest religion, but religion is more than clarity of thought. It is the activity of the whole man, intellect, feeling and will, acting and reacting upon the world in a way that makes for more and more fullness of life, that alone deserves the name of religion. Religion therefore includes, in its most highly developed form, science, philosophy, art and morality; the complete religious man will be scientist, philosopher, artist and saint. This is the ideal towards which the religious man in his best moments aspires.

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The subjective approach to religion which we have adopted implies the far-reaching step of rejecting the conception of Christianity as a supernaturally revealed religion, to be taken or left by the individual. This conception is based upon an exaggerated idea of the transcendent wisdom and holiness of God, Who is thought of as demanding of men conformity to His will because He knows better what is good for them than they do themselves. Man is, on this view, incapable of understanding either his own real needs or the nature of that which God has ordained to satisfy his needs.

The subjective approach, on the other hand, begins with the recognition of certain human needs, and the demand is made that whatever religion has to offer must satisfy those needs. From this view-point Christianity must stand the test which is applied to any other way of life, and if it cannot satisfy the needs of men, it must give way to a religion which does.

It is axiomatic for the religious man that his deepest needs cannot altogether be satisfied by the possession of, or by any relation to, the things of sense alone. There are deeper needs than those of the senses, spiritual needs which can be satisfied only by spiritual "treasure." Philosophers have long been teaching men to distinguish between three kinds of spiritual reality answering to the threefold spiritual activity of the human mind. As Truth answers to and calls forth the activity of the intellect, so Beauty stirs up the deepest emotions and stimulates art, and Right responds to the aspiration and furthers the moral achievement of man. These are the deepest needs that have yet been discovered within the life of man, and the measure of the satisfaction he finds in them is the measure of his real, spiritual life.

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In all great religions it is recognized that man is fundamentally spiritual. In the greatest of them is to be found the recognition of certain elements in human nature which tend to frustrate the satisfaction of man's deepest needs. These are the elements of desire or instinct. They may be classified, roughly, into three types: (1) desires of the flesh, (2) desires of the Ego, and (3) desires of the herd.

Long before man discovers his own spiritual nature, while he is still a child, there develop within him certain instincts—dispositions which determine their possessor to perceive certain objects, to experience certain emotions with reference to them, and to act towards them in certain ways. These instincts determine that certain objects are more desirable than others, and the child is confronted with the task of controlling his desires. This task involves the problem of unifying the complex system of desires around a central control, and thus there is discovered a need for a unified, individual self. Self-control, then, is a need which has an intimate connection with the desires of the flesh, and emerges from the attempt to control them.

When this centralized self-control is first established, the child finds it necessary to protect its individuality against disintegration, not only from the conflict of desires within, but also from the domination of stronger individuals without. He therefore develops tendencies to build around himself protective devices for the preservation of his spiritual integrity. But, in conflict with these egoistic impulses, there appears a desire for a different kind of relationship with other individuals. He discovers that he needs other individuals if he is to be more than a solitary animal. If he refuses to give this desire for fellowship right of way in his life he finds that Nature condemns him to the pain of loneliness, just as the physical organism suffers pain when it loses one of its limbs. Thus, out of the growth of the desires of the Ego, there emerges a deeper need for Fellowship.

The need for fellowship is experienced most strongly in connection with the instinct of sex, which demands a relationship of a certain quality with another individual. The normal result of the functioning of this instinctive desire is the development of a group of individuals united in bonds of mutual dependence and affection. Left to itself, the desire tends to build around the group protective devices against the destructive, conflicting influences of other groups, just as the individual seeks his autonomy in the midst of other individuals. Thus a group loyalty is developed, a family or herd sentiment, and the result is the social institution of the home, without which higher culture and civilization would hardly be possible. The development of larger groups with their characteristic loyalties, such as that of the nation with its sentiment of patriotism, is the same process carried on further. But man does not find his needs fully satisfied by such institutions. Each group as well as each individual, sooner or later, must find that it is organic to a universe, that nothing less than the universe is big enough as a home for the human spirit. Human desire drives man forward in the search for satisfaction, and in the process of the search he has built up an elaborate system of institutions, which supply him with more or less satisfaction; but in his best moments he knows that he is made for something better than them all, because his desires are merely the partial expression of more fundamental needs. God has made us for Himself, and our hearts may not find rest except in Him. Man's desire for fellowship is the underside, so to speak, of his need for the Kingdom of God, which is the control of the finite and temporal by the infinite, eternal spirit of the universe.

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The satisfaction of man's deepest need for the Kingdom of God is frustrated as much, if not more, by his inability to understand his need for it as by his lack of understanding or appreciation of the Kingdom itself. The difficulty in the way of the spread of true religion consists in the lack of that "hunger and thirst for righteousness" which is the prerequisite for complete satisfaction. Plain water never tastes so sweet as when one is parched with thirst.

Men persist in thinking that they can find satisfaction in lesser things, even when all experience and history shout at them to the contrary. It is therefore necessary to continue to do what Jesus spent so much time in doing—persuading people that only "treasures in heaven" can fully satisfy the needs of the human soul. Today, as in his day, there are four unsatisfying objects of desire in which men persist in seeking satisfaction. They might be called Mammon, the World, the Flesh, and the Devil; but they would probably be better known under the names of Material Prosperity, Custom, Habit, and Prejudice.[1]

> "Once there was a rich farmer who had a succession of abundant harvests. He debated with himself (for he was a man who made no friends and kept to himself), "What is the best thing to do now? With such splendid harvests I have no barns big enough to store my crops." "This is what I will do," said he to himself at last; "I will set to work at once and pull down my storehouses. I will build bigger ones and in them I will gather together my corn and all my goods. And I will say to myself, 'You ought to be settling down, old man; you have

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[1] I owe this analysis to a little book published anonymously by the British Student Movement, entitled "A Programme for the Revolution."

> enough to keep you well supplied for many years. Take plenty to eat and plenty to drink! Enjoy yourself and be merry!'." But GOD said to him, "You foolish man! This very night they are asking for you! And the things which you have got ready—whose shall they be?"
>
> "Thus it is when a man hoards for himself and is not rich as God reckons wealth—in affection for other folk." (Luke xii: 16–21.)

It does not take much imagination to conceive of Jesus repeating this story, and many like it, if he were to come into the modern world and attempt to preach his gospel of the Kingdom. Human nature is not essentially different now from what it was 1,900 years ago.

If a community is to have any sense of solidarity at all, it is necessary that it shall develop certain customs, certain ways of doing things, so that mutual understanding and co-operation may be facilitated. But Custom is good only as a bond of brotherhood, and becomes evil when it causes members of one community to despise members of another because of their "outlandish" customs and when scorn for the ways of others prevents them from learning from one another. It also tends so to value conformity that it hinders the development of constructive criticism within the community. When everybody is a follower there are no leaders. No merely customary type of community life can satisfy the needs of men for social progress. Custom must be controlled in the interests of human need; it was made for man, and not man for it.

Custom is social habit, so that what has already been said about custom applies equally to habit, which is the individual's customary way of thinking, feeling and acting. "Custom makes me do things because others do; Habit makes me do things because *I* always do. Both are unworthy for authority over human life." While it is true that the more of life we can hand over to what William James called "the effortless custody of habit" the easier will it be for us to enter higher worlds of interest, yet everything depends on our entering those higher worlds. Habits may be good servants, but they can be terrible tyrants. The satisfaction of man's need for character can never be found in the mere cultivation of habits. When men think to satisfy these needs by setting up a code of morals, however noble it may be, they unwittingly dethrone human freedom, which needs to be allowed to face new situations with new responses rather than always to behave in the same fashion.

Man's desire for an easy way out of difficulties leads him to make hasty judgments based upon inadequate, superficial analysis of facts. In many cases there is no time to analyse situations thoroughly, and snap judgments are inevitable; but such judgments are often elevated into a permanent attitude or prejudice which makes it difficult to keep an open mind to receive new impressions or new light on the facts. Once a prejudice has properly settled in a man's mind it becomes the nucleus of a whole system of ideas and feelings, and it becomes very difficult indeed to face ideas and facts that are inconsistent with it. Sooner or later it becomes necessary, in the interests of life, to dethrone prejudice and open the mind to whatever the future may bring. A solution which once worked in a given situation may come to be considered a panacea for all the ills of humanity, but the same situation never occurs twice, and solutions have to be found afresh for every one. For the proper analysis and solution of them the mind must be freed altogether from all prejudice.

In the language of the Gospels, man's deepest needs are "treasures in heaven," "God," "the Kingdom of God," or "eternal life." It seems clear that in Jesus' teaching these terms stand for what would nowadays be termed "ideal values." The modern way of saying that "life is more than meat" or that man should "work for the meat which endures unto eternal life" would be that the spiritual life of man (man's true life) depends for its continuance upon spiritual values, and cannot be sustained by material values alone.

Much of the confusion of thought which leads to the denial or rejection of spiritual values is due to failure to realize that when a religious man speaks of the life of the spirit he is referring to the kind of life which is characteristic of *persons*. It is too often assumed that the spiritual is something strange and alien to normal human experience, whereas it is of the very essence of personality. When the religious man says that God is a Spirit, he is claiming that personality is the highest existent in the universe; spirits are persons, and the spiritual world is the world of personalities, in which we are related to one another not only as objects of knowledge, but also as subjects of experience. If men would examine the processes by means of which they function in relation to this world, they would find that there are certain laws of logic, æsthetics and ethics which control their thinking, feeling and conduct, or at least limit them to more or less well-defined modes of behaviour. These laws can be discovered by patient investigation of one's own experience, and can be verified by reference to the experience of other persons. They may be very difficult to formulate in an imperfect language, but it is as certain that they exist as that there are laws of mathematics to which the human mind is obliged to conform.

It is customary to distinguish between these laws of the spirit according as they have reference to one or other of the three distinguishable functions of the human spirit. Logic, or the laws of Truth-thinking, has to do with the intellectual activity; Æsthetics, or the laws of Beauty and Art, has to do with the emotional function of the human spirit; and Ethics, or the laws of Right Action, has to do with the conduct of the human spirit.

If it be admitted that there is any intelligibility at all in the universe, it must be admitted that there is such a thing as Truth. The attempt to deny the existence of Truth involves the denier in the position of denying validity to his own denial. If I say there is no such thing as Truth, I must admit that there is no truth in my statement. To an unprejudiced mind it is evident that the Truth-ideal inspires all men's thinking and is essential to the whole process of thought. Man is in need of the Truth, in order that he may grow in understanding of himself and the world he lives in; and the Truth, when discovered, sets him free from the confusion and darkness of ignorance.

It is not easy to state a law of Æsthetics as convincing as are the laws of Logic; but it is just as true that there is such a thing as Beauty as it is that there is such a thing as Truth. Beauty inspires men's feelings in a way that ugliness does not, and men are aware that Beauty satisfies in a way that ugliness does not. That an ideal Beauty would completely satisfy is an axiom of the philosophy of the spirit, and the reality of such an ideal Beauty is attested by the fact that men judge beautiful objects according to some standard which they have never actually experienced by means of their senses. Man needs Beauty in order that his emotions may be controlled in the interests of the highest things in life. With the emotions trained to respond joyfully to the appeal of Beauty, the whole man is able to throw himself whole-heartedly into the service of his fellows and the building up of the ideal community.

It is the task of Ethics to discover and formulate the nature of the ultimate Good. Because of the difficulty of formulation, it is practically impossible to state its nature in a way that will stimulate conviction and action in its pursuit; but this is due to the simple fact that the pursuit of the Good Life is a practical matter, and is capable of definition only in action, rather than in theory. But that there is an ideal Right is axiomatic to the religious man, who sees in conscience the evidence of its existence, causing him to feel at least an impulse to judge between right and wrong courses of conduct. Man needs the ideal of Right conduct to inspire his will and cause him to reject all evil in favour of what he knows to be good.

While the distinction made above between intellect, feeling and will, and the corresponding distinction between Truth, Beauty and Right, are useful distinctions which contribute to clarity of thought, it must not be thought that there are no connections between these three realms of spirit. It is true that either Truth, Beauty or Right is an intrinsic value, worth pursuing for its own sake; it is true, that is to say, that Truth ought to be sought because it is true, not because it is either beautiful or good, that Beauty should awaken our highest emotions because it is beautiful, not because it is either true or good, and that Right should be done because it is right, not because it is either true or beautiful; but Truth, Beauty and Right are separated from one another no more than are a man's intellect, feeling and will. As the human mind is a unity, so are the ideal values gathered up in the eternal, infinite spirit of God. This eternal infinite Spirit is related to the temporal, finite spirits of individual persons in a most intimate way—more intimately than individual persons can be related to one another. God is the soul of our souls, the essence of that which is most real in us. When we are at our best, seeing deeply into the truth of things, feeling the harmony of it and strong to do that which we see to be right, we are most like God. We are "children" of the Eternal and Infinite; God is our "Father." The attitude which produces this experience of "sonship" is Faith, the aspiration of the whole man towards the ideal. Faith is insight into the fact of the presence of God in the human soul, the welcoming of that presence, and active response in co-operation with it.

It is clear that the attitude of Faith, as so defined, should produce an enthusiasm for the Ideal, a loyalty to principle that will prevent aspiration from falling anywhere short of perfection. But such loyalty to principle may seem at times to run counter to loyalty to persons. We may find that, in order to remain true to the highest we know, we must renounce our allegiance to persons who seem to hinder us in our duty. But if personality is the highest existent of which we have knowledge, it would appear to be our highest duty always to be loyal to persons rather than to mere abstract principles. There is a very real dilemma here—an issue which, in its acutest form, seems to leave the individual no alternative between the lonely path of duty and the betrayal of the cause for the sake of comfortable good-fellowship. In the face of such an issue, it becomes necessary to find a solution that will conserve the values involved in both alternatives. It cannot be right to do anything but one's duty; neither can it be right to be untrue to one's fellows. Something is needed to hold together in one supreme loyalty both principles and persons.

Now that which binds persons one to the other and at the same time inspires their loyalty to ideals is love. Love tends to cherish, protect and aid with all its power the object upon which it is directed. When persons are loyal to the best they know, it is a simple matter for them to cherish, protect and aid one another; but few are always loyal, and their disloyalty makes it difficult to love them. But nothing but love can turn them from their disloyalty and make them loyal again; nothing is so powerful as love to change an evil will into a good one. In love, therefore, we find the solution of the issue between ideals and persons; ideals and persons were made for one another, and it is love which holds them together. At any rate, there is nothing else that is able to do it. The religious man believes that Love *is* able to do it, because God is Love; he sees an age approaching in which the solicitation of the Ideal (the redeeming grace of God) will have won man's complete loyalty, and there will be no more disloyalty, for all will know that they are children of God and brethren one of another.

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While the above outline of what is claimed to be the essence of Christianity is necessarily incomplete, and while it may also be mistaken in some of its details, it is claimed that its line of approach and general standpoint make it capable of standing on its own feet without external support. It should not be necessary to build one's religion about a centre other than that of one's own experience, even though that other centre be the personality of the very image or incarnation of God Himself. Jesus of Nazareth was (and is) a historical person, who had a religion of his own which no other person could, or can, share in its inner essence, and every person must of necessity have a religion of his own: he cannot live by the faith of Jesus, but only by his own. In this sense every individual is the centre of his own religion. In what sense, then, if any, can we say that Jesus is the centre of Christianity?

It is clear that Christianity, as defined above, owes more to Jesus of Nazareth than to any other person; but just how much it owes to him, and the precise characteristics which it owes to him, are not so easy to state. We know so little about the way spiritual forces are at work in the world that we cannot say finally whether the personality of Jesus was absolutely unique or not. There are others who have contributed much to the religious life of mankind—men like Confucius and Gautama—who have witnessed, each in his own way, to the nature of the spiritual, and have demonstrated its supremacy. Must we claim that Jesus is of a different nature from such men, and must we cease to call ourselves Christian if we refuse to do so? Surely it is not necessary to make Christianity dependent upon such a theory of the "person of Christ." If Jesus is to remain central in Christianity, it must be because of the fact that he alone of all historic persons had an unwavering faith and an undiscourageable love for God and man, and not because men think he must have been somehow different from other men in "substance" or "essence."

The next question which arises is whether the individual Christian can be said to be central to the Christian religion. In the sense that every individual must be the centre of his own religion, this is so; but this fact would hardly justify a man in adopting the name of "Christian." To be a Christian is to adopt a certain way of life which has also been adopted by other persons, and which was supremely demonstrated in the life and teachings of Jesus. The very essence of this way of life consists, as has been said, in a common attitude of faith in God. It is faith in God (as revealed in the life and teaching of Jesus—or as discovered by Jesus) that makes the tie that binds Christians together. It is therefore God who is the centre around which the Christian religion is built; it is God, indeed, who takes the initiative and draws all men to Himself. This is, to be sure, precisely what Jesus was at such great pains to teach his followers; but they have persisted in putting their teacher in the place where he wanted them to put God; they have been more anxious to call Jesus "Lord; Lord" than to practise his teaching. The results of this tendency are apparent throughout the history of the church, which has not yet fully learned that God is our Father—"closer than breathing, nearer than hands and feet"—"in whom we live and move and have our being."

While much of the confusion resulting from this tendency must rightly be blamed upon theologians who have argued about things quite outside their experience, it is also attributable in large measure to the inadequacy of the language which has so often been used by people who have had the most profound religious experience. Because many Christians have, by meditation upon the life and death of Jesus, been ushered into a new life, they seem to think it obvious that it is the presence of the "Living Christ" which has produced their exaltation of spirit. It is not denied that Jesus is just as much alive and powerful today as he ever was; but the point is that the presence which is responsible ultimately, if not directly, for such religious experience is the eternal, infinite Spirit of God Himself. Jesus still leads men into new experiences of God, but why should men deny that God can be more intimately in contact with them than any finite individual can? It will perhaps be said that it is not "the Jesus of history" but "the Christ of experience" that produces the Christian life; but this is to introduce a theological fiction which will not bear analysis. Either Jesus is an individual person or he is an infinite, eternal spirit. If he is the latter, he is God, for there is not more than one infinite and eternal; and, if he *is* God, then he has ceased to exist as a finite individual. But, as Paul said long ago, "if Christ (he meant the Jewish Messiah, Jesus) is not risen from the dead, our faith is a vain thing." Jesus, if he still lives (and who shall say he does not?), must still be a finite individual, with whom other finite individuals can have fellowship, but who cannot take the place of God in religion.

Faith in God, then, is the irreducible minimum of the essence of Christianity. But faith, as will be seen from a glance at its definition above, is dependent upon the insight, receptiveness and responsiveness of the individual. That is to say, knowledge, affection and good works may serve to the increase of faith. It follows then that anything which stimulates men to seek knowledge, feel affection, and do good, will thereby add to their faith. It is here that we begin to see the place of Jesus in Christianity; for the evidence of Christian experience in history goes to show that there is nothing so powerful in these respects as the personality of Jesus. This is why men have called him divine (when they have really had cause to do so), and why we still call him so; for the revelation which is given to us in him is so adequate to the demands of the intellect, so compelling to our affections, and so imperative in its moral demands, that we have reason to call him "the Son of the living God." Truly he is the image of the Father, the supreme revelation of God and of true manhood.

There are many reasons why Christianity is not more widely accepted than it is. Life is so complex that it is very difficult for even a few individuals here and there to see it steadily and whole. If it were possible for an individual to arise in the twentieth century and see all the affairs of the world in their true perspective, men would have some reason for selecting him to lead them into the new age which all religious men seek. But the task of the present age is rather to get finite individuals to give what little talents they may have, without reserve, to the building up of the ideal social order. So many disintegrating forces are at work upon the Christian that it is a superhuman task for him to preserve even the least semblance of character. From the out-and-out materialist, from the philosopher whose "will-not-to-believe" makes him reject everything that cannot stand the pitiless scrutiny of formal logic, and from a host of others in between, the religious man has a hard time of it to keep his faith alive at all. So difficult is it, that the average respectable man says that the Christian way of life is impossible; he may admit that it is attractive, but he will affirm that the principles upon which it is based are impracticable. Compared with the faith of Jesus, the faith of Christians is woefully inadequate. He who said that nothing was impossible to the man of faith, and achieved things in the realm of human relationships which today outwit the resources of his followers, ought to put us to shame as we consider how little we trust God.

So we, finally, turn to Jesus as one who shows us our inadequacy, who stirs within us the desire to know the truth about God and the world in which we find ourselves, who awakens our deepest affections, and demands of us uncompromising loyalty to the highest we know. If he does not succeed in doing these things, to whom can we look for the inspiration and leadership that we need? Can we say that Jesus still has for the twentieth century the "words of eternal life"? Or has the world outgrown him; and must we solve our own problems, or leave them unsolved, without help from him?

The final answer to these questions can only come by trial; we have no right to say that Jesus' way of life is impracticable until we have given it a fair trial. There is, however, at least a high degree of probability that the religion of Jesus will yet prove to be the one way out of our present problems into the Kingdom of God. It at least satisfies the demands of logic, the needs of the spirit, and the requirements of the highest morality. What more should it do? . . .

AN HYPOTHESIS CONCERNING THE RELATIONSHIP BETWEEN BODY AND MIND.

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Part II.

The most important aspect of the hypothesis is perhaps its application to the diagnosis and treatment of mental disease. Unless there emerges the pragmatic importance which attaches to a theory which works, it has little value for those of us who are seeking to give affirmative answer to the question: "Physician, canst thou not minister to a mind diseased?"

In the approach to the subject of mental disease, it is of cardinal importance that we should be clear whether or not there is such a thing as mental disease of purely mental origin. Even this subject is still in debate among practising specialists in mental disease. It is almost axiomatic in the thought of many medical men that where mental disease is, there necessarily abnormality of brain cells must be, and be in a causal relation to the disease. This opinion is confirmed by an argument which (on critical examination) is found to run thus: Serious disease of the brain causes mental disease; mental disease previously thought to be without organic basis has been shown, with refinements in methods of examination of the brain, to have organic basis; therefore all mental disease must have causal organic basis. The inference is clearly unwarranted in logic and is also, I believe, not in accordance with the facts.

The readiness with which physical malady is assumed to be the cause of mental aberration is well illustrated by an amusing incident in my personal experience. One of the major hardships which I have suffered from my life in Korea has been that, for a while, I had the responsibility for keeping the hospital books; and I cannot do arithmetic. I am enough of a Freudian to entertain the suggestion that the reason why I cannot do arithmetic is that I don't want to do arithmetic and don't want to keep hospital books. Be that as it may, I have suffered much, for each addition of a column of figures provides the novelty of a new result. I was struggling one evening with my task, when a friendly visitor in the home came forward with a generous offer of assistance. The offer was promptly accepted. We worked for a while; then came a kind and solicitous enquiry: "Have you a headache to-night?" But I had no headache nor other brain or bodily disease.

No, we cannot argue from mental confusion to brain poisoning or even brain cell deficiency as a cause of the confusion. Psychic results often have psychic causes, and psychic causes only. Mental abnormality may arise from abnormality of psychism, and a strong confirmation of this fact is the other fact that grave disease of mental function is constantly being cured by direct appeal to the psyche.

If there be such a thing as disease of psychic origin, it is, next, of enormous importance to differentiate between physical and psychic factors, as a cause of symptoms; also to recognize how far and in what manner either has contributed in a particular case. Unless these elementary necessities are regarded in diagnosis, we shall inevitably fall into grievous errors in treatment.

I offer a simple classification of mental abnormality, on the basis of causation. I divide the assaults to which the human spirit is exposed into (*a*) the indirect and (*b*) the direct. The indirect class is due to injury to, or poisoning of, the brain; the direct class is psychical, and affects the mind, usually through the emotions and the will.

It is a fact that has seemed to some so incongruous as almost to be incredible that the mind of man ("in apprehension how like a god") is not merely dependent upon, but actually may be changed by, physical injury to the brain. Yet it is not too much to say that the physics and chemistry of the body—more particularly of the brain—are part and parcel of the personality. The man who is dealing solely with ideas and philosophies may almost overlook this fact, but we medical men are constantly being reminded that injury to the brain, or abnormality of the chemistry of the blood, brings about the subtlest and the gravest changes in the mind. The suggestion has been advanced—and it merits investigation—that a considerable proportion of the divorce suits in America involve women whose temper and disposition have become abnormal as the result of thyroid gland dysfunction and the deficiency of iodine which is part of such thyroid disease. Iodine is not a specific against divorce, but the connection between physical and mental ill is far closer than is sometimes recognized, even by those of us who are medically trained. Nor is there essential incongruity in the connection.

In an important article in *The British Medical Journal,* June, 1927, Professor Haldane re-emphasizes his contention that, in considering the nature of disease, we must commence with a conception which transcends mere physics and chemistry. A new category is necessary—Life. For the living organism there exists that which we characterize as health, or the normal. This normal the organism, by its self-determining activity, continuously seeks to maintain; to this normal it seeks to return when injury or poisoning has caused a departure therefrom. The environment must be such that the organism may selectively take to itself out of the whole environment the due proportions in mass and volume of those elements which shall make up the normal constitution of the organism and shall maintain its normal function. Organism and environment are then related, related as the Greek philosophers might say, in accordance with "reason." But there occur circumstances in which, on account of violence or poisoning, the environment becomes inimical to the organism. Structure is damaged and function disturbed. No longer can the organism establish harmony for itself out of the chaos of its environment. At such times, the relation of environment and organism is no longer according to reason. The world has become, for that organism, as we anthropomorphically, but I think properly, say, a senseless world.

What is true of the health and function of the lower organism is true also of the physiology of man. A man sustains a brain injury from a bursting enemy shell; intellect is clouded, personality is warped. Why? Because human personality is compacted of mind and body and as such requires a "reasonable" physical environment. A bursting enemy shell, contrived of human hate, is not a reasonable environment. Such facts exist; they are irrational facts. They are not irrational facts, if viewed as part of a merely physical order; for exploding shells continue to obey the laws of physics and chemistry however precious those persons may be whom the explosion injures. They are not irrational facts either, perchance, in the perspective of "that far off divine event to which the whole creation moves." Yet in a very real and practical sense they are irrational.

While the evidence for an indirect attack upon the human personality is overwhelming, there is a great deal of loose thinking and inadequate statement about the nature of symptoms which supervene as a result of poisoning and injury to the brain. One quasi-scientific statement, often made, is that after injury and poisoning the latest acquired characteristics are the first to disappear. Further, under the influence of uncritical evolutionary thought, credence is given to the *dictum* that with deterioration of brain cells there emerge from the subconscious depths of human nature the ape, the tiger (or perhaps the donkey), of man's family tree. We are told, further, that the mentality of the child bears witness to the truth of such ideas; and the followers of Freud have advanced theories meriting the designation, "fantastic," in support of their views. An able English neurologist writing on the subject, "The Nervous Child," has said that such Freudian writers would demonstrate more of the scientific spirit if, instead of reconstructing the child mind from theories based upon abnormal adult mentality, they repaired to the nursery and the kindergarten and acquainted themselves there with children.

Medical literature has failed to furnish discriminating description of what follows after deterioration of brain cells. For instance, the classical description of the irritability appearing after concussion of the brain is that the patient lies curled up in bed, resents being disturbed and resists attention, perhaps with profanity. I have already referred to the striking psychological study, by Sir Frederick Mott, of early changes in general paralysis of the insane. But one factor of first class importance seems to have been overlooked. No reference is made to the previous character and training of the individual affected. How far do identical injuries manifest themselves by widely different symptoms, such difference depending on differences in previous character and training? My experience leads me to believe that such differences are profound.

I contrast, for instance, the horrors of the *delirium tremens,* which often complicates pneumonia in the type of case one sees in the refractory ward of a metropolitan hospital, with the delirium of another pneumonia case which I was called upon to treat. The patient had spent the first half of his adult life as a builder of church and state in a cannibal island in the South Seas, and the latter half of it in ministering to the outcast lepers in Korea. The pneumonia toxin in the two types of cases was similar. The resultant delirium was profoundly different. In the second case the delirium was a pæan of triumph and gratitude and praise.

I knew a man who had devoted a life of strenuous service to the Christian ministry in an industrial suburb. He was smitten with a chronic degenerative disease of the nervous system. Gradually he was deprived of his faculties. I was with him the night he died. The mutterings of his last hours bore testimony to a spirit moving in realms of idealism loftier than those to which most men ever attain.

Although this subject has received too scant attention, from medical observers, it has been dealt with by some of the masters of literature, among them John Bunyan. His treatment of it serves to give point to the old medical adage: "Experience is difficult, judgment is fallacious." For instance, when Christian is passing through the valley of the shadow of death, "one of the wicked ones got behind him and whisperingly suggested many grievous blasphemies to him which he verily believed proceeded from his own mind." Again, when he passes through the river, "he had horror of mind and was troubled with apparitions of hobgoblins and evil spirits." At the same time Christian's companion, Hopeful, was little distressed; moreover, such feeble pilgrims as Mr. Despondency and Mr. Ready-to-Halt pass over the river triumphantly. Nor is this all, for one, Mr. Ignorance, who is no pilgrim at all, passes over "and that without half the difficulty of Christian and Hopeful."

As a partial explanation of these apparent inconsistencies in the production of symptoms, I advance this suggestion: Physical injury acts in the production of symptoms in two ways: it serves either (i) as an amplifier, or (ii) as a muffler of qualities already in the personality. By this twofold process of exaggerating some attributes and diminishing others, there is brought about a distortion from the normal, but there is not imported anything new into the personality. From two of the cases I have quoted, there appears evidence that it may be possible to build a personality so firmly and rightly integrated that no assault or poisoning of brain cell can mar its highest and most essential quality, that which is central in the personality. With degeneration of the brain tissue consciousness at length disappears, but its passing from our vision may be likened to the triumph of the gallant admiral whose vessel sinks but with flag flying.

The second division of mental disease I have characterized as arising from a direct attack upon the human spirit. Life and literature both attest such causation of mental disease. The wisdom of Shakespeare puts into the mouth of the physician attending Lady Macbeth these words:

> Un-natural deeds do breed un-natural troubles:
> Infected minds to their deaf pillows will discharge their secrets.
> More she needs the divine than the physician.

Many of the important causes of this direct attack are enumerated by the English Church litany when it says:

> From all blindness of heart, from vainglory and hypocrisy; from envy, hatred and malice and all uncharitableness; from fornication and all other deadly sin and from all the deceits of the world, the flesh and the devil, Good Lord, deliver us.

These things in the environment in which we live, and especially when taken into the life, are capable of producing devastating effects on the susceptible mentality. It deserves, I think, to be noted that an unsuitable environment may have a determining influence in bringing about mental disease. An eminent authority in proposing a definition of insanity suggests the formula: "A person is insane when he *cannot* think the thoughts, feel the feelings, and do the deeds of the society to which he belongs." I have a fundamental criticism to offer of the definition. It accepts, as the norm, existing standards of society, and tacitly demands conformity thereto on pain of ostracism from reason. It may well be that the individual is sane, and that it is the society about him which is deluded and perverted from right conduct. The case of Socrates and others suggest themselves. Further, the responsibility for the insanity of the individual lies very often at the door of society. For instance, a certain savage African tribe is said to be so held by its superstitions that it is demanded that the first girl baby of a family be put to death. It is not difficult to imagine a young mother torn to mental derangement between a mother's tender regard for her offspring and her fears concerning the tribal superstitions. Nor does one need to go to savage Africa to discover all the elements of disintegrating dilemmas. Neither money nor power satisfies the human soul, yet these are the molochs to which society and the nations have time and time again paid homage, demanding meanwhile that every individual should so worship.

In the Prayer Book list one notes the phrase "from fornication and all other deadly sin." In view of the emphasis that Freud has put on sex as producing mental disease this phrase is interesting. Freud is right in attaching importance to sex, but it would seem to me the Prayer Book is more right in that it recognizes sex and sex perversion in a perspective which includes other, and perhaps subtler, assaults on the human spirit.

The question arises: If such factors as these are causative in mental disease, how comes it that good people become mentally deranged? To that question I would answer first, and in the words of Christ: "There is none good but one." I would hasten to add, again in His words: "They on whom the tower of Siloam fell were not sinners above others in Jerusalem."

There is another aspect of the problem which deserves to be noted; and I write here from experience and from an intimate knowledge of the stresses through which some have passed. Our minds are finite; weak vessels of flesh and blood contain them; but a "spark disturbs the clod." The demands of the moral imperative and the infinite requirements of holiness pursue men. Little wonder that the human personality, wrestling with issues such as these—for there are those who face these issues—is shaken to its depths, and that sometimes mental derangement results.

The distinction which I have drawn between the physical and the psychic origin of mental disease calls for a like differentiation in the treatment to be adopted. Inasmuch as cause and effect, physical and psychic, are so intimately interrelated, the problem of treatment in a particular case becomes a nice one. It is therefore all the more important that our distinctions be definite, and especially that there be recognition of what are legitimate expectations in treatment. What may we look for from physical treatment, and what from psychic? There is much confusion of thought, nor is the confusion confined to Christian Scientists and militant materialists.

The goal of physical treatment is, I believe, a healthy body, all that, and nothing more. For my part, I discern only one boundary to mark the confines of man's control over the organic world. Some day, and through advance of medical and allied science, we have the right to expect that man will have the power regularly to restore an organ—be it brain or other organ—to physiological structure and function. Through science, so much and no more. We do not attain through science, nor ever shall, to an integrated personality. The only method which holds out any legitimate promise of a healthy mind and integrated character is the old method which concerns itself with the impact of true ideas and high ideals upon the personality, and with the free will which accepts these dynamic forces into the life.

There are certain diseases for which, even in the present stage of medical knowledge, specific treatment is available. For instance, the specific treatment of a broken leg is rest of the damaged limb with the fragments in apposition. The specific treatment for diphtheria is antitoxin. The specific treatment for the psychoses is, I believe, psychic treatment. In conjunction with specific treatment it may be advisable, in some cases necessary, to use adjuvant treatment. For instance, chronic ill-health from poisoning might delay the union of a fracture, and the removal of the cause of poison might expedite recovery. Septic foci at the roots of the teeth are a common cause of poisoning, but no man in his senses would propose to treat broken legs solely by a routine pulling of teeth. Some forms of treatment advocated and applied in the psychoses and the psycho-neuroses have about as much warrant in reason, or justification in experience, as such dental extractions would have.

In mental disease, as in other disease, the patient must be given the best possible environment, and all proper means taken to promote general health and well-being. But most important of all, specific treatment for the disease should be given, and the specific treatment is psychic, or, as I prefer to call it, spiritual.

My point here is well illustrated by the remark once made to me by an asylum medical officer. We were in the refractory ward. "When Nurse X is on duty," he said, "this ward is like a Sunday school." Now, assuredly, it was no corporeal force or influence from Nurse X which made the ward "like a Sunday school."

Under the term spiritual treatment, I would include an elucidation and interpretation of the psychic history of the patient, a sympathetic understanding of his difficulties, and encouragement and direction in facing and overcoming these difficulties. Often this will involve a reorientation of the patient to his fears and scruples and to his present total environment, both the actual environment and that projected by the patient's imagination. More, a reorientation with the present is often impossible till the patient is delivered from the past. Sometimes that deliverance can come only in terms of forgiveness. We are neglecting the wisdom of proverbial knowledge if we do not recognize that "conscience makes cowards of us all," and we neglect one of the experimentally ascertained results of physiology if we do not bear in mind that fear actually breaks down nerve cell tissue (Nissl's granules). Conscience and fear must be treated.

Recently I saw a middle-aged man suffering from an obvious neurosis. There were physical symptoms, but the whole aspect of the case proclaimed its psychic origin. The man had already had psychic treatment, and something, I judged, of the nature of psycho-analysis. As a matter of fact, the methods of Freud were as unnecessary in diagnosis as they would have been useless in treatment. As soon as the man's confidence had been gained, his story came out. He was a widower; in his loneliness and depression he had been suddenly tempted and had fallen into adultery. He added that thereafter he had "cried all night" and that "his conscience had been troubling him ever since." It appears to me obvious that a satisfactory reorientation for such a man can come only in terms of forgiveness and new hope. At the same time, it must be carefully borne in mind that self-accusation is by no means necessarily true accusation. The treatment for false self-accusation is not assurance of forgiveness, but deliverance from morbid self-depreciation and condemnation and reinstatement in merited self-respect.

In my practice in Korea, I find that the factors of major importance in the ætiology of the psycho-neuroses have reference to sex, to marriage, and the family, and to money and means of livelihood. In that civilization, as in our own, there exist, and are prevalent, gravest errors in judgment and failures in conduct relating to these subjects. In offering to my patients solutions for these and other difficulties inherent in the art of living, I make constant use of the words of Jesus. His teachings about sex, money, the family, fear, economics and the other problems which constantly appear and reappear in a psycho-neurological clinic, are strangely apposite, constructive and vital.

In the cases of definite psychosis, the patient is, of course, far less accessible to counsel and encouragement than in the psycho-neuroses, though even in the psychoses there is far more possibility of helpfulness through these methods than is commonly recognized. Even in cases where the patient is not accessible to what one might term the "psychological" method of approach, our therapeutic resources are not, I surmise, exhausted.

The New Testament contains a number of narratives of persons there described as "possessed of evil spirits," and describes their cure. The symptoms which these patients exhibit are not dissimilar from those of patients suffering from mania and other present-day types of insanity. The New Testament description of the symptoms is convincing, but the language raises difficulties. The term "spirit possession" suggests, to the mind of the civilization in which I live, the gross superstitions of the Orient about devils; or, to the mind of Western countries, associated perhaps with the strongly materialistic trend of our thought, it suggests half-defined ideas of some corporeal personality invading the body of the victim. These ideas are properly rejected, and they are not the ideas of the New Testament. It is instructive to note that the modern alienist, with his terms such as "compulsion" and "obsessions," describes the phenomena of his experience in language very similar to that of the New Testament. Indeed, what other terms can be used to describe, for instance, the case of a decorous person who became alienated from his proper habit and driven to obscene word and perverted action.

More especially in latter years I have been influenced in my treatment of the psychosis by the following consideration: The writers of the Gospel narrative had evidently come to believe that the One of whom they wrote, exercised an almost easy mastery over disease and even over the forces of Nature. Whether or not they had good evidence for that belief, I am not here concerned to discuss. My concern is this. Those same writers represent Christ as teaching that the cure of some forms of "those possessed with spirits" presents special difficulties. After the disciples had failed to cure the "boy possessed with an evil spirit" (a case, I take it, from the detailed description of the symptoms and their course, of long-standing epileptic dementia), Christ is reported to have said: "This sort cometh not forth but by prayer and fasting."

As Professor Hogg, of Madras, has pointed out, the inference is that while other sorts of disease may be controlled by other methods (including physical and chemical agents), this sort is to be cast out only by prayer and by prayer which costs. Obviously, there is no moral value associated with a prayer unless already the whole of the material and psychological resources of the physician praying for his patient have been offered in the treatment of a case. If these and the other spiritual requirements of prayer are complied with, there is, my experience leads me to think, evidence that prayer is a constructive and creative force. Telepathy may offer an analogy and a partial explanation to those who, without such analogy, find it an idea incredible that prayer should effect results and results not otherwise attainable in this difficult field of medical endeavour.

The hypothesis, then, which I advance concerning the relation between body and mind may be summed up thus:

The hypothesis takes cognizance of the facts of physiology and neurology. It accepts and reckons with these facts; at the same time, it resists the mechanistic inferences of a materialistic philosophy. The hypothesis relates itself to the arresting conclusions which the insight of modern mathematical physics has attained; at the same time, it is illumined by the genius and inspiration alike of Hebrew and Hellenic thought. It is a form of dualism, but is not content to leave matter and mind in two unrelated universes. It sees inorganic matter as thought that has taken form; the organic world it envisages as thought taking living form. In the human being, crown of a biological process in which the *élan vital* of creative evolution has given birth at last to man, it perceives an organism fashioned by the same forces that have brought into being the animal world; it sees in him, also, a person, in whom in a way unique in Nature, conscious and self-conscious thought is enshrining itself in living form. The body is the instrument by, through and in which we, who are spirit, perceive meaning, hold memory, and achieve purpose. It may be pointed out that the analogy sometimes used concerning the relation between body and mind—that of a player and his instrument—fails to give proper recognition to the intimacy of the relationship which does in fact exist. Rather it may be said that *we* are the music of our personality, body and mind. The Greeks were not wrong when they listened for the "music of the spheres." Of that greater music we also are a part. In that music, body and mind are related. We are living thoughts thinking thought. The *logos* has become flesh. The cosmos is intelligible.

VITALISM.

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In any discussion of the relative merits of mechanism and vitalism as satisfactory theories of life, it is well to begin with a definition of terms. Mechanistic biology is that biology which claims that it is possible to interpret life and everything in it in terms of physics and chemistry. In other words, that the living organism is a highly complex physico-chemical machine. Vitalism is the negation of this view. It claims that the organism is something besides an aggregate of atoms and molecules having a certain energy relation in regard to themselves and the outside world. That the "something" is non-physical and allied to mind or consciousness. On the whole, the mechanistic theory holds the field in the biological world of today.

The mechanistic explanation of evolution is, briefly, that the character and development of the individual is determined to the minutest detail by the material character of the cell from which it sprang and its mechanical relations with the outside world. I propose now to criticize this view under two heads:

(1) The mechanistic theory of heredity.
(2) The mechanistic theory of environment.

1. *The machine view of heredity.*

"Twelve years ago," says Jacques Loeb (1903), "the field of heredity was the stamping ground for the rhetorician and the metaphysician; it is today perhaps the most exact and rationalistic part of biology, where facts cannot only be predicted qualitatively but quantitatively."

This brings us to the germ-plasm theory, the foundation of mechanistic heredity. Now it is a fundamental fact of biology that in reproduction the new individual arises from a single cell, which is in most cases a fusion of two cells derived from the parent organisms. Now in that single cell, say the mechanists, the organism is, as it were, preformed. All parts, characters, organs, etc., of the mature organism are to be found represented by material fragments.

A word of explanation is now necessary. The individual cell consists of protoplasm and a nucleus. The nucleus contains bodies known as chromosomes. The chromosomes are the bearers of the hereditary characters. According to Weismann's theory, the chromosomes can be divided into determinants, ids, and biophors, biophors being the ultimate vital particles.

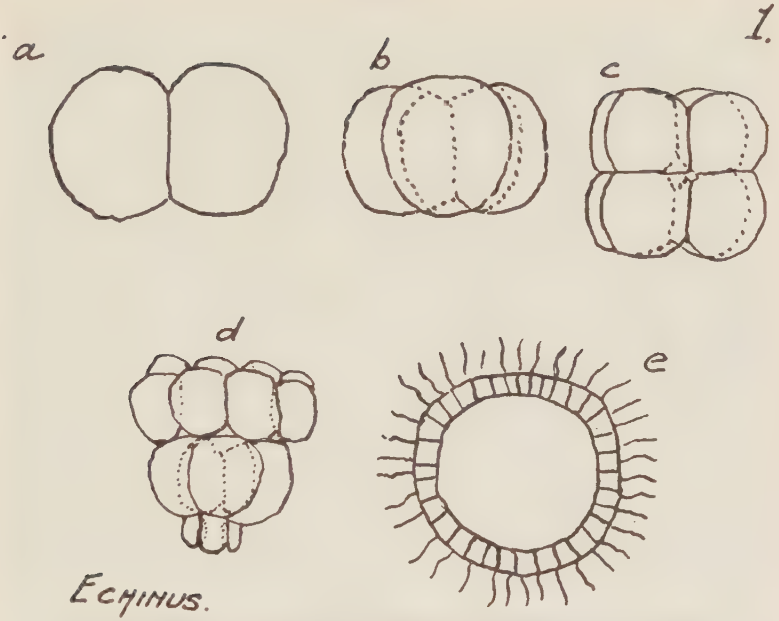
The Mendelian school identifies its Mendelian factors with specific parts of the chromosomes. It terms these particles "genes." According to Weismann, each determinant represents a particular part of an organ. Ontogeny consists in sifting these determinants one from another till they are located in the tissues they represent. They then migrate out into the protoplasm and proceed to build up the kind of tissue required.

The germ-plasm theory, then, even on this brief showing, is highly complex. But it is alleged to rest on definite observations and experiments. Let us consider some of them. After fertilization, the fertilized egg cell segments up. At the first cleavage it splits into two cells. According to Weismann's theory, we should expect that one cell would contain determinants for one half of the body and the other for the other. Roux took the developing frog's egg and succeeded in destroying one cell at the two-celled stage. The remaining cell developed and gave rise to half an embryo only. Driesch,(1) however, was not satisfied with these results, and embarked upon a further series of experiments. He killed one cell, turned the other upside down, and a small but complete embryo resulted. If the first two cleavage cells of a salamander's egg are separated, two whole embryos will result. In other organisms (including fishes, ascidians, medusæ, amphioxus, and hydrozoa) each of the first four cleavage cells (blastomeres) is capable of developing into an entire embryo. In the sea urchin each cell of the sixteen-celled stage developed into a fresh embryo.

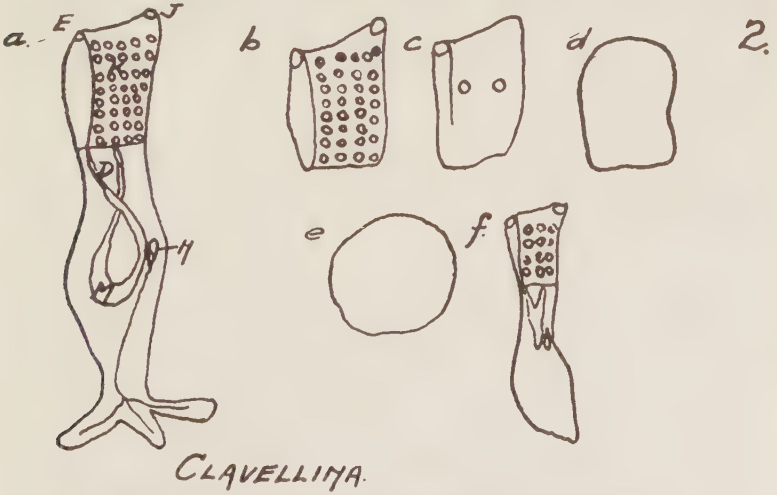
Let us now consider the sea urchin's egg. Normally it develops into a small sphere of about 1,000 cells, known as a blastula (Fig. 1). Says Driesch, "If you cut this blastula with a pair of very fine scissors in any direction you like, each part so obtained will go on developing, provided it is not smaller than one-quarter of the whole, and will form a complete larva of small size."(2)

Commenting on these experiments, Driesch says: "The embryonic 'machine,' then, that is supposed to exist in the normal system, would be obliged to be present in its completeness in one part of the system and also in another such part, and yet in any other such part too, and equally well in parts of different sizes overlapping each other. . . . In face of these facts, the machine theory as an embryological theory becomes an absurdity."(3)

Equally interesting in this connection are Driesch's restitution experiments. A certain ascidian, Clavellina, has a branchial apparatus that can be separated from it. On separation, this will round off and form a new ascidian (Fig. 2). Furthermore, it can be cut in various places and a new ascidian



a, Two cells; *b*, four cells; *c*, eight cells, arranged in two rings of four, above one another; *d*, sixteen cells, four "micromeres" formed at the "vegetative" pole; *e*, optical section of the "blastula."—AFTER DRIESCH.



a. Diagram of the normal animal: E and J openings; K = branchial apparatus; D = intestine; M = stomach; H = heart.
b. The isolated branchial apparatus.
c-e. Different stages of reduction of the branchial apparatus.
f. The new *whole* little ascidian.—AFTER DRIESCH.

will still result.(4) One is tempted to linger over these and other experiments, but it is impossible to deal with the question further. It is worth remembering in this connection, however, that Aristotle based his belief in the indivisibility and unity of the animal soul, among other things, upon such phenomena as the regeneration of the segmented halves of a worm.(5)

So far we have taken the original cell and its germ-plasm for granted. But it is worth while pausing to ask how the germinal machine arrived there in the first place. Let us consider the developing ova. Most primitive creatures produce many more than one egg cell. The female ling, for instance, spawns about 18,000,000. Granting, then, the germ-plasm theory, each of these cells contains an embryological machine, which must have existed in the egg mother cell. This brings us to Driesch's second proof of vitalism: "How," he asks, "could a machine be divided and divided and always remain the same?"(6) Stated in Haldane's words, the argument runs thus: "The real difficulty for the mechanistic theory is that we are forced, on the one hand, to postulate that the germ-plasm is a mechanism of enormous complexity and definiteness, and, on the other, that this mechanism, in spite of its absolute definiteness and complexity, can divide and combine with other similar mechanisms, and can do so to an absolutely indefinite extent without alteration of its structure. On the one hand, we have to postulate absolute definiteness of structure, and, on the other, absolute indefiniteness. . . . The mechanistic theory of heredity is not only unproven, it is impossible. It involves such absurdities that no intelligent person who has thoroughly realized its meaning and implications can continue to hold it."(7)

2. *The machine view of environment.*

In the previous section we have been considering the development of the individual; we now pass to consider the development of the race and the evolution of complex and widely differing organisms and structures from simpler beginnings.

How does the mechanistic biologist explain all the bewildering variety of living organisms, adapted as they are to such a multiplicity of activities and conditions? Quite easily! A simple formula covers the whole ground. Evolution is due to "Natural Selection of chance variations."

Let us deal with the first part of the formula first. What exactly is natural selection? According to this theory, there is competition between all forms of life for the means of existence. This competition is so keen that if any organism happened to be born with a variation that made it better fitted for the conditions of life it would have a better chance of surviving. According to Darwin, this struggle was keenest between members of the same species. Huxley carried this view much further than Darwin. He declares: "The animal world is on the same level as a gladiator's show, the creatures are fairly well treated and set to fight, whereby the strongest, swiftest and cunningest live to fight another day."(8) To this view of Nature strong exception was taken, and not least by naturalists who had spent their lives observing Nature in the fields, not studying her in a closed room. It called forth a masterly protest from Prince Kropotkin. That, he indignantly declares, is not a true picture of Nature. "If the numberless facts that can be brought forward to support this view are taken into account, we may safely say that mutual aid is as much a law of life as mutual struggle, but as a factor in evolution it probably has a far greater importance, inasmuch as it favours the development of such habits and characters as ensure the maintenance and further development of the species, together with the greatest amount of welfare and enjoyment of life for the individual, with the least waste of energy."(9) By bringing together an enormous number of facts from his own observations and from those of other naturalists who have studied Nature in all parts of the world, Kropotkin makes out a splendid case for mutual aid.

He deals with numerous cases of mutual aid among birds and insects, and goes on to say: "Going now over to the mammals, the first thing that strikes us is the overwhelming numerical preponderance of social species over those few carnivores that do not associate."(10) He continues: "Happily enough, competition is not the rule either in the animal world or among mankind. It is limited among animals to exceptional periods, and natural selection finds better fields for its activities. Better conditions are created by the elimination of competition by means of mutual aid and support.(11) To avoid competition ants combine into nests and nations; to avoid competition most of our birds move slowly southwards as the winter comes on and undertake long journeys to places where food is plentiful. Many rodents fall asleep when competition should set in, the reindeer when food is short in the interior migrate towards the sea, buffaloes cross immense continents, beavers when they grow too numerous divide into two parties, the old ones go down and the young ones go up the river; other animals, like the titmouse, resort to new kinds of food. The tendency of Nature, not always realized, is "Don't compete! competition is always injurious to the species, and you have plenty of resources to avoid it! Therefore combine, practise mutual aid!"(12)

A little thought will show how fundamentally this doctrine differs from that of orthodox Darwinism. It differs, indeed, probably far more than its author realized. According to the struggle-for-existence hypothesis, natural selection is a mechanical force guiding life from without. But the law of mutual aid, as Kropotkin has expressed it, is something quite different. It is a fundamental tendency moulding life from *within*, a tendency which, he believes, is part of the very stuff of life itself, a tendency that aids living creatures to adapt themselves to their environment by transcending it.

Before leaving the question of struggle for existence, there are one or two points worth noting which suggest that the whole matter is not so simple and straightforward as appears at first sight. An objection made by various biologists to the selection theory is that it does not take into account the effects of chance. " If the struggle for existence were of the nature of a race at a well-regulated athletic meeting, where the competitors are given a fair start, where there is no difference in the conditions to which the various runners are subjected, then, indeed, every variation would tell. I would rather liken the struggle for existence to the rush to get out of a crowded theatre when the alarm of fire is given. The people that escape are not necessarily the strongest of those present. Propinquity to a door may be a more valuable asset than strength."(13)

Another interesting point is made by Dewar and Finn: " We must bear in mind that the struggle for existence is most severe among young animals, among creatures that are not fully developed. Nature pays no attention to potentialities. . . . Moreoever, and this is an important point, death in the case of young creatures overtakes broods and families rather than individuals."(14)

So far I have confined myself to a discussion of the actual struggle for existence itself; I have shown that there is no ground for supposing that it operates in the way in which it is alleged to operate by the Darwinians and neo-Darwinians. But that, of course, is only part of the problem. De Vries remarked a long time ago that natural selection might explain the survival of the fittest, but it could not explain the arrival of the fittest. Let us examine the formula a little more closely. " Natural selection of chance variations " is understood by the mechanistic school to mean the selection of variations that somehow occur in the physical or chemical nature of the germ-plasm. Some gene or biophor, or more than one becomes modified through some accidental circumstance, the organ it represents varies correspondingly; if this variation results in the organism being better adapted to its conditions of life, it will survive. It will be seen that the environment is supposed to act in a mechanical way and by the selection of these variations (whether they are the " minute variations " of Darwin or the mutations or " jumping changes " of De Vries), and is thus the directing cause, indeed the chief cause of evolution. But, as Bergson remarks: "It is one thing to recognize that outer circumstances are forces evolution must reckon with, another to claim they are the directing cause of evolution. The latter theory is that of mechanism."(15)

The more thorough-going mechanists not only claim that environment acts indirectly by conserving advantageous variations, but that it is the direct cause of variation itself. But, as Bergson very properly points out, adaptation is not mechanical adjustment, it is not an imprint but a reply. As he says, there is a tendency in biology to use the word "adaptation" in two entirely different senses: "In a particular case one talks as if adaptation were an effort of the organism to build up a machine capable of turning external circumstances to the best possible account: then one speaks of adaptation in general as if it were the very impress of circumstances passively received by an indifferent matter."(16)

Let us, for the sake of argument, grant the action of natural selection, assume that it acts as its advocate would have us believe. Can we explain complex adaptations on the germinal hypothesis of "accidental variation"?

Bergson has emphasized the positive and purposive character of adaptations; another point to be borne in mind is their reference to special parts of the environment. In many cases an organism will be found adapted to a special feature of its environment and no other. Take, for instance, cases of obligatory parasitism. The parasite is adapted to certain "unique and irreproducible features" of its environment. It may be said to represent such features in its bodily structure. Furthermore, in cases of obligatory parasitism, symbiosis, etc., there are reciprocal adaptations on the part of the host organism. How can we explain such representative adaptations on the germinal hypothesis?

We must bear in mind that "parasites tend to become os specialized as to be peculiar to particular hosts; ecto-parasites frequently differ from species to species, and the flea of one mammal, for instance, may rapidly die if it is transferred to another, although similar, host. The larval and adult stages of endo-parasites become similarly specialized. . . . The general tendency is in the direction of absolute limitation of one parasite, and indeed one stage of one parasite to one kind of host."(17) Furthermore, their action "is frequently selective; particular substances, such as glycogen, are absorbed in quantities, or particular organs are specially attacked."(18)

With the development of parasitism, we have tremendous modification of the hereditary structure. Normal organs of locomotion degenerate, so also do organs of sense whose use is to make the animal react swiftly to changes of environment. Jaws are replaced by sucking tubes, etc., and the alimentary canal becomes simplified; other extensive modifications take place. So profound are these structural modifications in many parasites that their affinities can no longer be recognized. Along with this degeneracy, we find an enormous increase in egg-laying capacity, necessitated, of course, by the limited possibilities of life for the parasite. Moreover, we find that parasitic and symbiotic adaptations are usually accompanied by reciprocal adaptations on the part of the species serving as hosts.

Seba Eldridge justly draws the following conclusion from these facts:

> (1) "A pre-established harmony between germinal variations and specific features of the environment, in order that the correlation between the two may be accounted for, must be postulated by the germinal hypothesis."
>
> (2) "An external co-ordinating agency must be postulated not only to account for such pre-established harmony, but also for the order or system of germinal variations."
>
> (3) "The representation of a unique and irreproducible feature of the environment, as implied in every parasitic, symbiotic, or commensal adaptation, is inadmissible even if the foregoing assumptions be granted, since representation of such features of the environment without prior acquaintance with or reactions to those features is a self-contradictory conception."(19)

The same writer shows how we might construct a mathematical formula to show the chances of such representative adaptations on the "accidental variation" hypothesis: Let the total number of species of organisms (past, present and future) be represented by M. Let us suppose that N variations in a certain order were necessary in order that parasitic adaptation to the host species be complete. Let N^1 be the number of variations occurring in the host species before its protective adaptation was complete. "On these assumptions, the formula representing the chance of the given reciprocal adaptations occurring would be:

$$\frac{1}{M^2\,(\,\underline{|N}\,)\,(\,\underline{|N^1}\,)}."^{(20)}$$

Even in this formula concessions have been made to the germinal hypothesis. It has been assumed that the hereditary character of the organism could represent unique and irreproducible features of the environment without previous interaction or acquaintance, and also that the individual germinal variations implied in N and N^1 could be retained until active combinations of them were effected. Eldridge comments: "When these concessions are withdrawn the germinal hypothesis is really reduced to a verbal formula without any assignable content whatever."

It will be seen, then, that the relation between the organism and its environment is, as Driesch has well said, "a reaction between two unities." Furthermore, it is worth remembering that in its representative adaptations the organism reveals the presence of mind which, among other things, is, Aristotle tells us, "the power of becoming. . . . objects without their matter."(21)

But is it possible to explain the development of any complex structure on the mechanistic theory? Take, for instance, the eye of the vertebrate. If the eye is to develop, we must imagine variation taking place in different parts of it at once; if the variations do not fit in with each other, the eye will be rendered unfit for vision. To explain the occurrence of variations in different parts of a complex structure, the mechanists invoke correlation. For instance, Darwin tells us, white cats with blue eyes are generally deaf. Hairless dogs have bad teeth. But surely such examples constitute what is vulgarly known as a "get out." Two or three simultaneous variations are one thing, but two or three co-ordinated and complementary changes quite another. Deafness, blue eyes and white hair do not co-operate to make the cat more suited to its environment; quite the contrary. Says Bergson: "That a change in the germ, which influences the formation of the retina, may affect at the same time the cornea, the iris, the lens, the visual centres, etc., I admit. . . . But that all these simultaneous changes should occur in such a way as to improve or even merely maintain vision, this is what on the hypothesis of sudden variation I cannot admit, unless a mysterious principle is to come in whose duty it is to watch over the interest of the function."(22) On the other hand, as he points out, if the variations are insensible "some good genius must be appealed to . . . in order to preserve and accumulate these variations, for selection will not look after this."

But the difficulty does not end there. No organ "lives unto itself." Its variations must be accompanied by variations in other parts of the body. The different organs must be adapted to each other. If we did not have intra-organic adaptation, the organism could not function as a unified whole. Let us take a relatively simple case of intra-organic adaptation, that of the connective tissue to the structures it envelops.

Says the physiologist: "So completely is the entire body pervaded by connective tissue, that if a solvent could be found that would dissolve away all the tissues of the body except this one, there would still remain in perfect outline, not only the whole body, but each organ down to the minutest detail."(23) As Eldridge comments: "A most perfect adaptation of connective to other tissues is here represented, an adaptation which is undoubtedly hereditary."(24) The adaptations are not *en masse*, but specific for each part, perhaps for each cell. As he points out, when we have modifications in an organ which necessitate modifications in its connective tissue, the latter is adapting itself to a "unique and irreproducible feature of the environment," the chances of such variations arising by accident are infinitesimally small, and that a germ-plasm with the variability requisite to the occurrence of such adaptive variations would be utterly unfit for survival."(25) The difficulties are still further increased when we come to consider the intra-organic adaptations of such structures as the nervous system.

Another significant objection Bergson raised against the "natural selection of chance variations" theory is that it is incapable of accounting for similar structures produced along different lines of evolution. "Mechanism," he says, "would be refutable—if it could be proved that life could manufacture the like apparatus by unlike means, on divergent lines of evolution; and the strength of the proof would be proportional both to the divergency between the lines of evolution and the complexity of the similar structures found in them."(26)

It will be seen that this argument resembles, in essence, Driesch's first proof of vitalism, in that it envisages the production of the same results by unlike means.

As Bergson suggests, accidental variation, however small, implies the working of a vast number of small chemical and physical causes. "How can accidental causes occurring in an accidental order be supposed to have repeatedly come to the same result, the causes being infinitely numerous and the effect infinitely complicated?"(27) The example Bergson gives of this convergent evolution is the eye of the pectin and the eye of a vertebrate. This example has been questioned, as it is doubtful whether the eye of the pectin is an organ of vision. But the general principle holds, and other examples can be cited. For instance, the occurrence of sex independently in plants and animals; the occurrence of the reproductive sequence known as "alterations of generations," which arises independently in several plant families and in the lower animals; the development of digestive juices in the carnivorous plants; and, again, the development of similar organs, structures, and methods of life in widely differing families of parasites. Life gives us many instances of the adaptation of different means to the same end.

In a paper such as this, it is not possible to enter into an account of some of the mental characters of living creatures and see to what extent they are explicable on mechanistic terms. But it may be permissible to say a few words about movement. This brings us to Driesch's third proof of vitalism.

According to the machine theory of life, a given action A should be a dependent variable of any given stimuli (x, y, z). We recognize a person in the street, it may be from any angle. We may recognize him by his speech, by his walk, or by some mannerism, but to all of these entirely different stimuli we react in the same way. Again, a piece of news may be conveyed in French or in German. The physical stimuli are different, yet we react in the same way. On the other hand, the physical stimuli might be almost the same, as if some one should say: "My father is dead," "Thy father is dead." In this case the effect produced by a slightly different stimulus would be out of all proportion to the physical cause. In other words, a dozen stimuli, entirely different in the physical sense, may produce the same series of reactions, yet two stimuli almost identical physically may produce entirely different reactions(28). Yet if we are to adopt a purely mechanistic view of stimulus and reaction, we must postulate some definite mathematical relation between the stimulus and the reactions.

Here we see once more appearing in full force the argument that the organism is a unity and not a sum. There is no exact piece by piece correspondence between the organism and its environment. There is no mechanical hit-and-miss, "press-the-button-and-the-figure-works" relation between the animal and its surroundings. The organism responds as a whole, or, as Driesch puts it, "one totality is connected with another totality." While it is impossible to elaborate the point, it is worth noting that Driesch's comments on movement are entirely in line with the conclusions of the Gestalt psychologists.

It would seem, then, after a consideration of some of the most salient characteristics of living organisms, that the mechanistic theory is shown to be untenable. Shall we content ourselves with the negative assertion of its inadequacy? Those who do not hold the mechanistic hypothesis are various in their views. But it appears the issue is clear cut. It is not only mechanism or vitalism, but mechanism and a vitalism that is freed from mechanistic trammels, and identifies life with consciousness or mind.

An attempt will be made in a following paper to show the weakness of those vitalistic theories that compromise with mechanism on the main issue, while admitting the existence of life as an independent entity. It will be sought to show that when these theories attempt to account for the "evolution of mind," the weakness of their main position is made manifest. However, as the consideration of mental evolution belongs to the realm of philosophy, its whole discussion will be relegated to a further paper.

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A PLEA FOR AN UNNATURAL MORALITY.

By T. Jasper.

A variety of causes combine to intensify the gregarious instinct in our times. Amongst these must be numbered the decline of moral life and the emergence of industrialism, bringing great cities and crowded tenements. Other reasons why gregariousness is growing are the increasing rapidity of transit and communication and the tightening of economical inter-dependence between men and nations. We have come to a type of man whose motives may be traced as never before to herd influence. What we need now is a morality to counteract this influence. In saying this, one takes the side of those who claim that morality is valueless unless it causes inner strife. This, however, is scarcely the prevailing belief in advanced circles today. The old morality of repression is being swept away, with the rejection of the deistic theory that sustained it, and we have now a horde of adherents for what is termed "natural morality." Sexual freedom, freedom from labour, freedom from children, even freedom for children, are desired, if not in all cases demanded. There is a deal of *talk* about freedom, almost as if we tried to drown the clanking of our chains. The truth is that we have replaced servitude to the king or priest by servitude to the crowd. The former was a physical and intellectual servitude, the latter is instinctive, and all the more dangerous to the development of the spirit of the species. Anything that is done under the influence of the herd masquerades to the doer as a free action and an admirable one.

And here one glimpses immediately the genesis of natural morality, and also the danger that confronts the human race. The good man, as judged by natural morality, is the conforming type of man, who accepts gregarious influences easily and responds to them enthusiastically. When the populace choose a "ruler" nowadays they usually seek a mouthpiece. Thus the politician attains to power by appealing to the more easily seduced desires of the people—and becomes himself a slave to those desires. He conforms and debases where his function is to affirm and direct. So that policy springs rather from base desires than from wise decisions. The people at present will not suffer leaders they respect—respect is akin to fear, and we have not yet learnt to value fear—but rather choose those whom they like, for whom in fact they have a kind of contempt. All this does not make for progress.

Likewise, from the view-point of individual happiness, gregarious influence tends towards spiritual stagnation rather than self-realization.

Through the Press, through social and political propaganda, through literature come to the pilgrim the voice of the herd, and the easiest thing on earth is to echo that voice, the hardest thing on earth is to reject it. The efforts of all later day reformers have been directed towards making life gentle and amiable for men of average talents, who then make no effort to improve such talents. The ideal apparently is not to make life noble, strenuous and inspiring, but *easy*. This is the herd ideal, the altruistic ideal, the goal of natural morality.

The most valuable morality of which we have any record, the Christian code, was precisely the most unnatural. The amazing manner in which Christian peoples progressed as compared to the adherents of other religions can only be understood when we realize the relationship between spiritual strength and inner strife. The spirits of our forefathers were irradiated and invigorated by the sparks that sprang from the contact between duty and desire. What was a god of love if not absolutely opposed to mediaeval tendencies? And what was giving and forgiving? And fasting and sexual abstinence? It is the custom to decry the influence of Christianity on the human race; but it has been both potent and beneficial, and that largely through its then unsuspected unnaturalness.

Art has been just as unconcerned about falsifying the face of Nature as religion. Of music Jean Paul Richter cried: "Away! away! thou speakest to me of things which in all my endless life I have never found," and Wordsworth wrote of "a light that never was on land or sea." Nobody ever spoke or thought as people do in books—and we are all the better for this literary untruthfulness. The tortuousness, tediousness, and disunity of normal thought is never presented, nor the trivialities and incoherencies of normal speech. Art, literature, and religion have played an important part in elevating and strengthening the human spirit; yet they followed an instinct that lacked biological classification, and chose methods that smacked of chicanery. Therefore, though a morality, or technique of the art of living, that aims to resist the gregarious instinct—not to extinguish it—cannot in our times claim to be natural, it may well be beneficial, and, in any case, has plenty of precedent for its unnaturalness. What, then, are these qualities that we need to develop? We need to foster individualism and impersonality—not of the detached and desiccated kind, but of the interested and vigorous kind; we need to practise cruelty and coldness towards social sentimentality, and to court fear and difficulty. Finally, we need to approach altruism—so desirable because so *difficult* in Christian days—in a sceptical spirit. The good man judged by this code would not be so natural as the good man gauged by gregariousness, but he would be more vital and immeasurably freer. And what is more, he would have a future, whereas the gregarious man has none.

OLD WINE IN NEW BOTTLES.

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It is extraordinary how in the light of modern knowledge in new fields of inquiry a revaluation of history is constantly in process, or rather than a revaluation, a new valuation of aspects of history hitherto neglected. Thus, for instance, in this century there has been a review of history from the standpoint of education. The true physis or nature of history cannot be seen in beginnings, as, for example, the vote of £20,000 in England for public education in 1833 was significant only in a party sense, not in a national one. Again, another review of history now in progress is the psychological one. Old facts, formerly merely picturesque or literary, assume a more intimate human significance when viewed psychologically—in other words, the mind of the past is being literally dug up from hitherto neglected materials, just as Troy, the Egyptian ostraka, the archæological treasures of Ur of the Chaldees, and innumerable other sources have, after long neglect, proved a veritable treasury of information—indeed, they are the buried complexes, the hitherto disregarded complexes of antiquity. These thoughts have come to me over and over again as old well-known passages of the classics have presented themselves to memory. I don't know if any psychologist has attempted to reconstruct the subconscious of Greece or Rome, but it is quite certain there is abundant material ready for examination. Consider, for example, in Tacitus—to take the first one that presents itself (that is, if an idea or a fragment of memory can be permitted to " present itself ")—the passage in the *Germania*, describing how the deliberations of the Germans on public questions were conducted to the accompaniment of free potations of a ' humor ' distilled from wheat or barley and fermented to something like wine. The value of drinking during the deliberations is said by the writer to be that drinking in their opinion fostered an open simplicity of thought, and also that the mind was the readier to warm up to big proposals, nothing was held back, all the cards were on the table. Next day the matter under discussion was reconsidered, "*et salva utriusque temporis ratio est*," *i.e.*, to the principle (or reasoning method) of the mind in drink and the mind without drink due weight was given. Tacitus adds, "*deliberant, dum fingere nesciunt; constituunt, dum errare non potest*," *i.e.*, they deliberate while incapable of false pretence; they finally pass resolutions when they are not likely to be wrong. If there is any truth in the process—quite apart from history—as I think there is, it is surely susceptible of explanation along modern lines of thought. The creative power is largely in the unconscious, the selective power in the conscious mind. Many brain-workers can testify that just on half-awaking the mind is frequently creative—material is thrown up in great abundance, oftentimes humorous, sometimes gross, sometimes idealistic; often, too often, it is so lightly present that it loses coherence in the waking moments and vanishes. It is not only in the penumbra between waking and sleeping this occurs. For instance, this article with all its imperfections on its head, except the alcoholic one described above, thrust itself into my mind in broad daylight half an hour ago as I walked from the post office enjoying the sunshine and just "thinking of nothing at all." That liquor has the Germanic potency still is only too true. But it has a value. Many students can say, if like the Germans they disclose the '*secreta pectoris*,' that beer first revealed them to themselves. One of these in his maturer years told me that he was greatly surprised one evening at a smoke night, after having partaken of what was euphemistically known in my day as one or two drinks, to find himself at the piano singing a comic song, and that ever after that he had quite a different view of himself and his fellows: it seemed as if a barrier had been broken down. The confusion caused by alcohol in the higher, more delicate, more lately acquired, and therefore less stabilized fields of cortical cells or of mind, or both—whichever it is—is in the mild stages of drinking and in student years compensated for by the sense of power, the sense of getting to know oneself, the sense of having resolved *pro tem.* that accursed feeling of conflict or half-ness which worries young men. I do not put this forth as a plea for drinking; and I trust no readers will use the theory to rationalize otherwise irrational indulgence. But there is undoubtedly a great feeling of relief brought about by the process. There is a field of investigation waiting here: Why do young men get drunk—men who really don't care for drink and who do not continue the practice? It ought to be possible for psychology to explain the sense of half-ness or buried-ness that young men suffer from, and, further, to prescribe some remedy not too bright nor good for human nature's daily food or drink, something that will, to use the jargon of the day, integrate the personality, something that will ensure that, to requote Tacitus, "*salva utriusque temporis ratio est.*" He was well aware of the danger of the process—unfortunately, there needs no penetrative mind to see *that*—for he remarks that if you give these people all they want they will be vanquished by their appetites not less easily than by arms. Their modern representatives in Germany and Britain seem in no imminent danger of overthrow from a vice which apparently paved some roads for Roman domination over savage tribes. But there is a danger or a difficulty for peoples, held to be essentially introvert, in making the inner outer, as a Froebelian educator would say. Education cannot solve all our difficulties of mind by rationality or by self-discipline, if that is to mean the domination of the lower instinctive mind by the higher reasoning mind. I doubt if anything can do that permanently—can, that is, gather all our mental powers into a dynamic concord permanently, except religion or a belief that views as realities all our strivings, but regulates them in a scale of values under one final value, under a Platonic Idea of the Good, if you will. Without that, the hope of forming a permanent high character that will be passed on to generation after generation in the social heredity seems to me a dream which, in the closing words of the "Utopia," is rather to be wished than hoped for. In the individual character success in unification may be achieved for a lifetime or for part of it through devotion to money-making, science, social efficiency, any purpose at all that gathers together all the various personal powers to achieve the purpose set. But this is success, not character. Success can be got without character, by energy, cunning, intelligence, persistence; but these things alone cannot build character. But I seem or am running on the pedagogue's rocks—beginning to preach—whereat, farewell philosophy. But if the Editor will permit it, I hope at some future date to offer on various passages in the classics some further observation of the nature roughly indicated above.

RESEARCHES AND REPORTS.

PSYCHOLOGICAL CLINIC FOR CHILDREN, VICTORIA UNIVERSITY COLLEGE, WELLINGTON.

By PROFESSOR T. A. HUNTER.

SINCE the first psychological clinic was founded by Professor Witmer at Philadelphia over thirty years ago, this plan of diagnosis and treatment of minor and major mental disorders that afflict children has won more and more approval. With the development of dynamic psychology and the popular interest in the view of Freud that the first few years of life are the most critical, clinics have found that parents and social workers, in ever-increasing numbers, are prepared to seek the help of the psychologist.

For many years past parents and guardians have from time to time consulted me concerning their children, but, owing to the pressure of other work and to the lack of assistance, it did not seem possible to begin a psychological clinic in connection with the Psychological Laboratory of this College. However, towards the end of 1926 conditions seemed more favourable, and, after consulting with my colleague, Dr. Sutherland, it was decided that, provided we could obtain the co-operation of the College Department of Education and the School Hygiene Division of Public Health, we would found a psychological clinic for children, especially those not over ten years of age. In our view the psychological examination should not stand alone. It is essential that, on the one hand, there should be a thorough medical examination of the child, and, on the other, methods of pedagogical treatment should be in the hands of an expert who is in close touch with the schools in which the children are being taught. Both Professor Gould (Professor of Education) and Dr. Ada Paterson (Director of School Hygiene Division) very willingly agreed to help us in this work, and the clinic is thus the result of the co-operative efforts of all three departments.

Owing to the pressure of other duties, it was possible to give only Saturday mornings to this work, when two, or at most three, cases could be examined. Even this could be done only through the willing assistance given by some teachers and by the senior students of the Psychology Department. The general plan followed has been as follows: The child is first sent to the School Hygiene Division for medical examination and the doctor's report is sent to me before the child appears at the Clinic. Here a full history of the child is obtained and a thorough investigation of the child made by tests of different kinds—intelligence, performance, temperamental. With the assistance of Professor Gould, a plan of treatment is then devised and communicated to parents and teachers. In many instances Professor Gould has visited the schools and conferred with the teachers; the School Medical Officers and the Child Welfare Officers visit the home when necessary and report on conditions there. In a few special cases it has been considered necessary to place the child for a time under instruction either in the Education Department of the University or in a special school treating a specific type of defect. The aim is, as far as possible, to obtain a clinical picture of the child and to consider each case in relation to its own peculiar conditions—medical, psychological and social.

Cases have come to us from various sources—directly from parents, from teachers in the schools, from those in charge of children's homes, from Welfare Officers, and from Children's Courts. In no case is a child examined unless the consent of the parent or guardian has been obtained.

Since the Clinic began work, the examinations in fifty-nine cases have been completed. A rough classification of the cases gives the following type of cases :

(*a*)	Cases due to physical disability	7
(*b*)	Cases due to mental disability	16
(*c*)	Cases in which there were no apparent natural defects, physical or mental, but which had been determined by various environmental factors, mainly in the home	36
		59

Of the cases under (*c*) at least half show home situations in which those in charge were either :

(1) Over-anxious—child becoming dependent and lacking initiative.
(2) Neglectful—child lacks parental affection or ordinary home experiences : these defects often show themselves in defence mechanisms, compensations, fantasies.

As far as possible we have followed up these cases by letters to parents and guardians and by reports from medical and welfare workers. Our experience confirms the view of Dr. Cyril Burt : " If we study the histories of those who give trouble to society, of those whose social life even at this early age becomes unhealthy, we are struck by one constantly recurring fact. There is, in nearly 90 per cent. of these youthful cases, some disturbance or disorder in the family life." The difficulty is that, so far, provision for dealing with the varying types of cases has not been adequate. But even under the present disabilities there is abundant evidence of the success of the work of the Clinic.

Uses of the Clinic.

(1) *To Children.*

Our emotional attitude towards the child, together with the influences of the old magical explanation of mental phenomena, has made us fail to treat the child in a scientific way. We think of the child not as an individual, as a personality, or even as a problem, but as being x years old, in Standard III, retarded, naughty, good, etc., forgetful of the fact that these terms are mere words that give us some emotional satisfaction as a substitute for knowledge, but do not in any way explain the mind or conduct of the child. If we wish to do justice to the child we must try to get a clinical picture of him medically, psychologically, pedagogically, and socially ; in any or all of these, examination frequently shows that the child has not been really understood.

Many children fail to make the best of themselves because of some physical defect, which often, too, gives an emotional twist to the character of the child. In this connection the school medical service has been helpful, but its numerical strength is not nearly sufficient for the great task that awaits it.

Again, children differ greatly in regard to mental capacity and emotional stability. We have a narrow standardized schooling, and if the complex child does not fit into that scheme of things, so much the worse for the little human being. It is not uncommon to find the child of genius looked upon as retarded by the school, which is really preventing him from stretching his mental wings. Many children fail to make normal progress because their emotional life is upset ; they are out of tune with the teacher or with their parents, and the resulting conflict mars the development of the whole personality.

Two extreme types of cases are bound to be met with by anyone who examines many children : Children who have lacked any real affection in their early years and whose personality has been distorted thereby—some of these escape into a world of fantasy ; children who are the darlings of their doting parents, never allowed to adventure on anything, whose every wish is anticipated. They are not only tied to their mother's apron string, but bound up in the apron. They become absolutely dependent and never grow up. I recall one mother who, while she was bewailing the fact that her boy could do nothing, was taking off his cap, coat and scarf, and, although the boy was about ten years of age, she said she always laced up his boots. Why should he do anything ?

Early fears have a very bad effect on many children, and in some cases lead to serious mental disorders. It ought to be a criminal offence to frighten young children, and yet many parents seem to rely mainly on fear as an instrument of discipline. Noyes tells us that one task of mental hygiene is to develop parents fit for children to live with.

Similarly, in education we ought to have much more information about the child if we are to judge him fairly ; our school systems—especially the larger classes—leave much to be desired. We ought, too, to appreciate the child's social problems ; he is going to move on from one social community to another : from the home to the kindergarten, from the kindergarten to the primary school, and so on. We do the child a great injustice if we fail to develop in him the power to meet new conditions and adapt himself to them. The adult is far too prone to look at the matter through his own eyes rather than through those of the child. In many cases, also, what poor motives stimulate the adult : not the welfare of the child, but parental pride or ambition, self-complacency or snobbery, fear of the opinions of the neighbours. These are the rocks on which the lives of many children make shipwreck. So that for many children the Clinic is a godsend ; it may lead to their being understood.

(2) *To Parents and Guardians.*

It is, unfortunately, true that some parents have little or no interest in their children ; but these are exceptions. The great majority of children who suffer by parental action belong to parents who, though well-intentioned, are ignorant. My experience is that parents are grateful for information that will enable them to treat their children more scientifically. One of the pressing needs of the day is that knowledge of the main principles of modern psychology should be understood by all parents, teachers and magistrates. In our complex society, with its hustle and bustle, the whole nature of the home is undergoing change, and the problems that face both parent and child are new and difficult. Many parents are beginning to realize that, if they had but known, both they and their children would have been saved a great deal of worry and the lives of all made more fruitful and harmonious. The time is coming when parents, teachers and politicians will be required to be trained for their jobs. I am sure that in the intervening years parents will find the psychological clinic useful, not merely as a means of re-educating their children, but as a method by which the mirror will be held up to their own lives. Every adult appears to be enthusiastic for the reform of the young, principally because it saves him the much more difficult task of self-reformation.

(3) *To Teachers.*

No one who has not tried to teach a class of forty or fifty can have any idea of the worry, bad temper and fatigue caused by one or two children who are " difficult." It means a good deal to the conscientious teacher if he can feel that each of these cases, as it arises, will be scientifically investigated, and, if the decision is that the child is to remain with him, he will have the co-operation of those who are competent to examine and advise in such a case. Our experience has been that the teacher is more than willing to co-operate with the Clinic, not only in the interest of his own peace of mind, but also in the interest of the child.

(4) *To Officers of Child Welfare Department and Magistrates in Children's Courts.*

Many of the cases dealt with by these officers present difficult problems, and the Child Welfare Department has been most anxious to use the Clinic whenever possible, and by their social workers to investigate the home conditions where necessary. The establishment of Children's Courts has changed the attitude of some magistrates towards the problems of juvenile delinquency, and they are more ready than they were to consider the psychological condition of the delinquent. This has been due mainly to the efforts of the Child Welfare Branch. We may yet work up to the position maintained by Dr. Cyril Burt : " For the successful treatment and prevention of juvenile delinquency, there is one measure which seems as essential as it is definite : the establishment of psychological clinics."

(5) *To Students.*

Senior students in training in the Departments of Psychology, Education and Social Science benefit greatly by being allowed to take part in the examination of these cases. Mere theory in psychology is of little use to the teacher and social worker. They have to apply the principles to the problems of their professions, and this can be done effectively only by those who have been trained in both fields—theoretical and applied. The danger in the mental sphere, as in all others, comes from the untrained enthusiast. It cannot be too strongly stressed that thorough training is necessary in this work. It is true, of course, that tests can be given by anyone ; that is, he may ask the child the questions and record the answers. These are the people who speak as though intelligence tests were the " foot-rule " of the mind, showing that they have neither knowledge of the complexity of the human mind nor reverence for the personality of the child. It is not merely a question of giving the tests ; it involves interpretation of them, which implies a scientific knowledge of the nature of the child, a training in methods of dealing with the child, and an appreciation of what the child's reactions signify.

AN EXPERIMENTAL STUDY OF THE CONCEPT.

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INTRODUCTION.

THE experiment, which is the main subject of this report, had for its aim an examination of the mental processes used in attempting to formulate a concept from a mass of data.[1] James⁽⁸⁾ defines the act of conception as that of the isolation and identification of a portion of experience, while Stout⁽¹¹⁾ considers that a concept is acquired by a process of synthesis following upon an analysis of experience. Pillsbury's⁽¹⁰⁾ definition, "an abstract idea that contains elements of many particulars," as well as his emphasis upon the factor of meaning, is also in accordance with these views. For the purposes of this investigation, a concept was assumed to mean an abstract idea, gradually developed by a slow process of analysis of experience followed by a synthesis.

HISTORY.

Moore's experimental study of "The Process of Abstraction" [2] in 1905 consisted in giving his subjects a series of groups of nonsense-characters. They were required to determine as quickly as possible whether there was any common element in each group. The subjects were necessarily aware of the nature of the investigation, and introspections gave the most important results. Gruenbaum[3] provided for his subjects a simultaneous presentation of two groups of simple characters, one character being common to both groups, the characters themselves being meaningless. Each subject had to note the common character and observe as much as possible about the others during the presentation. Introspective reports were taken. In 1912 and 1913 Miss S. C. Fisher⁽³⁾ investigated "The Process of Generalizing Abstraction and Its Product—The General Concept." She was concerned with "the procedure and the process by which the complete and developed form was ultimately reached." [4] She required detailed introspections from her subjects. Her material consisted of four groups having ten drawings in each. Each group was designated by a meaningless name, printed in capitals below each drawing of that group. The drawings constituting a group were exposed in succession to the subject. A week later the subject was required to define a group as fully as possible, and then to give an introspective account of the process of recalling. The series was then exposed again, the subject defined the name, etc., and this procedure was continued until further examination did not result in the recall of any new features. Miss Fisher set out to examine some six different problems, but in no case can it be said that her results are adequate to the problem attempted. She concluded that "the essence of the process of generalizing abstraction consists in a specific and characteristic mode of behaviour in consciousness of a succession of imaginal or sensory contents, *i.e.*, in their changing relative focality and in their temporal aspects, such as their rate of rise, their degree of perseverance and their rate of disappearance."[5] Her investigation was concerned with the genetic development or natural growth of the concept. This, however, seems to be an unconscious gradual process which might altogether evade introspection.

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[1] Thanks are due to Dr. Martin, under whose direction the work was carried out, for advice in the selection of the problem and in the preparation of the material and apparatus.

[2] *Cf.* Hull⁽⁷⁾.

[3] *Cf.* Hull⁽⁷⁾ and Eliasberg⁽¹⁾.

[4] Fisher,⁽³⁾ p. 34.

[5] Fisher,⁽³⁾ p. 205.

English,⁽³⁾ in his "Experimental Study of Certain Initial Processes of Abstraction," used meaningless material and depended upon his subjects' introspective reports. He found that there are two general alternative ways in which abstraction takes place: either by the assimilation of a complex situation as a whole to some familiar concept, or by an analysis of the situation into smaller assimilable components.

Clark Hull's⁽⁷⁾ behaviouristic experiment on "Quantitative Aspects of the Evolution of Concepts" abandoned the method of introspection. Chinese characters, each on a card 2 inches by 1 inch, were successively presented to the subject, who was prompted as to the class-name for each character. Subjects were required to give the class-name for each character, without prompting, as soon as possible. Here the concept was not an end in itself, but a means to an end, the reaction to a symbol by means of its class-name. His results are concerned with a comparison of various methods of concept-formation with regard to such matters as their efficiency, and not with the mental processes.

Miss E. Heidbreder⁽⁶⁾ published "An Experimental Study of Thinking" in 1924. Defining thinking as "any activity which, by some means other than overt motor reaction, produces responses which are adequate, novel and invented,"[1] she attempted to make the process of thinking observable: (i) by reducing activity to very simple terms—the subject was placed in an entirely artificial world of symbols; (ii) by obtaining objective indications of the course it was taking, by the subject's adjustments to the symbols of this world; and (iii) by causing it to be exhibited while actually in progress. Her subjects were given a succession of artificial situations which increased in difficulty and complexity, in which they had to respond without any directions from the experimenter. Subjects were required to solve a problem correctly and discover the principle governing the correct solution. Altogether 180 problems were solved, and the results which are of greatest interest here are, firstly, that nothing was found "which could be identified as a complete act of thought,"[2] and, secondly, that "the last step, verification, was extremely rare, so far as anything like logical corroboration is concerned. . . . The uncritical acceptance of successes was the rule rather than the exception."[3] The major portion of previous experimental work has been concerned with the formation of concepts, although some, like that of English, deals with the exploitation of previously-acquired concepts. Some investigators have used their subjects' introspective accounts, the subjects having full knowledge of the aim of the experiment; in some investigations introspections were used, but the subject did not know the aim of the experiment; still other experimenters excluded introspections and allowed their subjects no knowledge of the problem under investigation. The last of these methods must be dismissed as inadequate for the purpose of this investigation; with the second there is less opportunity for a knowledge of the experiment to influence the introspections given; the first seems to provide more exhaustive data for introspections, however, and for that reason it was adopted here. While in real life the process of concept-formation is necessarily of slow development, having such development frequently interrupted, our experiment was concerned with the utilization of a concept already possessed, and permitted of a complete account of the main phases of mental adjustment. In concept-formation, as it occurs in the development of the individual, the accumulation of materials to provide a complete concept is gradual. In this study, which examined the fitting of a concept to a situation, the whole of the examples were presented at once.

INVESTIGATION.

The method adopted was that of eliminating an extraneous member of a group, after the plan of the Pressey "Cross-out" tests. Thirty groups, each of ten words, numbers, or geometrical figures, were constructed so that each group contained nine items which had some element in common, that element not appearing in the tenth. Each group was printed on a small card. For their exposure a simple slide apparatus was used. This provided uniform conditions, and also facilitated the subject's concentration before each exposure. A stop-watch, graduated in fifths of seconds, was used to measure the time taken.

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[1] *Op. cit.*, p. 6.

[2] *Op. cit.*, p. 164.

[3] *Op. cit.*, p. 170.

The thirty cards were first given to six representative judges, who were asked to express an opinion as to their suitability as material from the point of view of difficulty, and the opportunities which they gave for introspection. They were arranged in three sets of ten, according to the heterogeneity of the problems presented and the time which seemed to be necessary for finding the correct concept in each case.

As examples are included three groups, one from each set :

[1] 1 (i) : Bottom, Cleopatra, Cymbeline,
Desdemona, *Faustus*, Iago,
Lear, Malvolio, Ophelia, Pericles.

2 (iv) : North Pole, Mount Everest, Antarctica,
Alaska, *Timbuctoo*, Ice Cream,
Liquid Air, Source of the Rhine, Glacier.

3 (iii) : Stone, Cement, Steel,
Wood, Brick, Concrete,
Iron, *Cardboard*, Glass, Slate.

Eight men, unacquainted with the material, acted as subjects. Two of these (G and F) had no training in psychology, three (A, D, and H) had completed an experimental course, two had completed two years (C and E), and the other man (B) had four years' training. Each subject was required to attempt the solution of sets 1, 2, and 3 respectively, on each of three successive days, commencing at the same hour of the day. The subject was seated comfortably at a convenient distance from the exposure apparatus, which was well illuminated. The card was in position, and the shutter closed. He was then told that when the shutter was opened, a card on which there were ten items, all but one of which had a common attribute, would be exposed. He was required to find the common attribute, and name the word which did not possess it, as quickly as possible. The naming of the word by the subject marked the completion of the task. After the correct word had been named, an introspective report was immediately taken. Sometimes the subject did not find the correct concept after a considerable period (about six minutes in a few cases), and, as the aim of the investigation was to examine mental processes rather than obtain solutions of the problems presented, the task was relinquished in such circumstances. From data gathered from the introspective reports given by the subjects an attempt was made to outline the processes found in this form of concept-acquisition.

RESULTS AND CONCLUSIONS.

Two distinct types of process appeared; they may be designated "*intuitive*" and "*analytic*." In the "*intuitive*" type a procedure corresponding to English's(2) first method of abstraction, that of "the assimilation of the situation as a whole," was found. The subject read the words and became aware of the concept. Examples are quoted from the introspections :

A. 1 (i) : "I read over the words and immediately after the perusal I appreciated the fact that they were all Shakespearian. . . ."

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[1] These figures indicate location of Group, *e.g.*, 1 (i) = Set 1, Group (i);
and A. 1 (i) = Subject A, Set 1, Group (i).

C. 1 (vii): "When I saw the card the circle stood out immediately, first, I think, because it was a circle, and then because it was not blank. The concept 'blank' did not grow, but was immediately obvious."

A. 1 (ii): "The concept appeared suddenly and an attempt was made to verify it by seeking the exception."

This method of acquiring a concept was characteristically rapid (*cf.* Table I for times), and appeared to lack any obvious analytic processes. Subjects could only give brief reports of their experiences, yet three distinct phases may be observed: (1) The subject read through the data presented, (2) experienced the illumination or realization that one concept appeared adequate to the data, and (3) then proceeded to verify that illumination; *e.g.*, H. 2 (ii): "I read over the words, and the illumination 'jewels' came suddenly. I was quite certain when I saw radium."

The "*analytic*" method of acquiring a concept was one in which the subjects made a deliberate attempt at analysis when seeking the common attribute; *e.g.*, A. 1 (v): (a series of numbers, each equal to the sum of the previous two *minus* one), the subject tried to find a common factor, a common difference, a difference that was a multiple, etc., and, by trial and error, finally arrived at the essential quality. It was noticeable that this second method resulted in solutions not so rapid as in the case of the "*intuitive*" process. With both methods the acquisition of the concept fell into three phases: (i) Presentation, during which the subject read through and perhaps analysed the data on the card; (ii) Illumination, when some possible concept appeared; and (iii) Verification, when the adequacy of the concept was considered during a review of the data.

Concepts seem to have been acquired as a result of imagery or associations induced by some item or items on the card. Further introspections will illustrate this:

E. 1 (x): "Asia gave me the idea 'geographical,' and I picked out all the geographical words, but there were too many of them. . . ."

B. 3 (iii): "Stone and cement gave me the image of a half-built house, and the idea of building material came from this. Then I read through to see what was not building material."

B. 2 (iv): "The concept came suddenly as a reminiscence of a lecture."

Not all cases of acquisition, however, were so ascribed by the subjects to imagery or association: generally a detailed account of the process of acquisition was not given.

The main difference between the methods described above is to be found in the first phase, that of Presentation. As has been noted previously, in the "*analytic*" method Presentation was a phase of deliberate analysis, and on those occasions—by far the majority—when the "*analytic*" method was adopted after an unsuccessful attempt at an "*Intuitive*" solution, the phase was repeated after any illuminations resulting from the "*intuitive*" method had been rejected as incorrect.

The possibility was evident that the formation of some of the groups of items might have caused subjects to use one or the other of these two methods. For example, it seemed probable that the easiest groups would lend themselves to "*intuitive*" solutions, while the most difficult would require careful analysis. It is possible to rank the groups in order of difficulty, using three criteria, firstly, the number of subjects who solved each, and secondly, the average time required for the solution of each group. Taking rankings according to these criteria of difficulty, those problems which were solved by the "*intuitive*" method alone were in the easier half, while those solved solely by analysis were in the most difficult third.

In all cases subjects reported that illuminations, whether they produced the correct concept or not, came suddenly into the focus of attention. Their only apparent antecedents were the images or associations which have been noted previously. Illuminations seem to have been due to the selective nature of attention which was efficient in isolating the common factor.

Verification was not really concerned with concept-acquisition, but was, in this experiment, necessary in order that the subject might find the word to be excluded. Miss Heidbreder concluded that verifications are made only on rare occasions, but the different nature of her material and the fact that her subjects received no instructions were possibly important factors in this result.

A final comparison of the findings of this experiment with the opinions expressed by Graham Wallas is of interest. Professor Wallas follows Helmoltz in an analysis of the process of creative thought and finds four "stages of control": Preparation, or the accumulation of data relevant to the problem under consideration; Incubation, when the subject "is not consciously thinking about the problem"; Illumination, "the appearance of the 'happy idea' together with the psychological events which immediately preceded and accompanied that experience"; and, finally, Verification, a review of the solution obtained regarding its adequacy in relation to the data.

No period of Incubation was observed by subjects in this investigation. Under the conditions of the experiment such a stage, if it did occur, must have been very brief. It would be included in the first stage, that of Presentation.

TABLE I.

TIME AVERAGES IN SECONDS FOR SOLUTION OF EACH GROUP.

Set I.			Set II.			Set III.		
Group.	Time Average.		Group.	Time Average.		Group.	Time Average.	
	Intuitive.	Analytic.		Intuitive.	Analytic.		Intuitive.	Analytic.
1	15·3	—	1	26·5	64·0	1	15·5	23·0
2	15·0	—	2	13·5	—	2	15·0	41·0
3	23·0	67·8	3	12·7	79·75	3	14·0	46·7
4	22·7	84·5	4	22·6	54·5	4	21·0	30·0
5	—	232·0	5	30·0	82·3	5	20·5	131·25
6	12·8	—	6	15·3	55·3	6	19·2	—
7	6·5	31·0	7	145·0	47·0	7	—	—
8	—	141·0	8	11·3	19·0	8	36·0	37·0
9	12·0	112·3	9	—	50·2	9	29·3	39·7
10	—	121·0	10	—	60·25	10	—	222·3
					TOTAL AVERAGE		22·19	82·73

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REVIEWS.

THE METAPHYSICS OF PRAGMATISM. By Sidney Hook, Ph.D. With an Introductory Word by John Dewey. Chicago: The Open Court Publishing Co. Pp. 144. Price: 2 dollars.

In his Introduction to this book, Professor Dewey points out that variant developments in human thought in their early stages suffer in statement and apprehension in two ways, logically opposed yet psychologically complementary. On the one hand, there is an exaggeration of the factor of novelty creating the appearance of a total breach of continuity. On the other hand, there is an injection into the new ideas of older conceptions which are irrelevant and the elimination of which is demanded by the new. A period of confused controversy is the result. "Just as it takes time to discover the respects in which a new idea completes and organizes old beliefs, so it takes time to detect and eliminate old elements which are so taken for granted that they are unconsciously projected, to its undoing, into the new. Gradually, often imperceptibly, an equilibrium is attained as eccentricities are smoothed into connections and engrained habituations are re-made." These very true remarks, it is claimed, are illustrated in the case of the newer movements which are termed pragmatism and instrumentalism and classic philosophic thought; and, in particular, they are claimed to apply to the present essay. The misunderstandings and exaggerations of the earlier stages of criticism and discussion are being left behind, and Dr. Hook sets out to achieve a union of the basic ideas in the newer movement with those of the classic philosophic tradition. The book is thus an attempt to lift discussion above the level of controversy *pro* and *con* which has characterized so much of the consideration of pragmatism.

The author says that although pragmatism has come of age in a complex industrial era, it may be regarded as the culminating expression of one of the great philosophic *motifs* in the history of thought. "Together with almost every phase of evolutionary naturalism and positivism, it revolves round a conception of man designated by Max Scheler (following Bergson) as '*homo faber*,' which sums up man's activities as (1) a sign-making animal (ein *Zeichentier*), (2) an instrument-using animal (ein *Werkzeugstier*), and (3) a 'brainy' animal (ein *Gehirnwesen*)." The primacy of the practical is thus the defining emphasis of the pragmatic point of departure, hence the stress on ways and means, methods and instrumentalities. In view of the many names and tendencies which are associated with pragmatism, Dr. Hook makes it clear that by pragmatism he is going to understand not "the personal and consolatory pragmatism of Schiller, nor the mystical and nominalistic pragmatism of James, but, first and last, the social and scientific pragmatism of Peirce and Dewey. Its synonyms might well be—pragmaticism, instrumentalism, or experimentalism." What Dr. Hook does is to re-interpret and extend the theory of the instrument in ways which aim at freeing instrumentalism from its earlier subjective tendency. It has been taken to signify that thought and knowledge exist only as means of accomplishing some private advantage. This is too narrow a theory of the instrument. The instrumentalism presented is disinterested and objective. Thought is an instrument it is true, but a distinctive one among other instruments. The rôle of instruments in science and industry is noted, and it is argued that even in the world of ordinary social intercourse particular instruments are taken not only as signs of instrumental function, but as clues to subject-matter as well. What, then, does the instrument *ueberhaupt*—the instrument as *category*—imply for the realities and common subject-matter of scientist and statesman, psychologist and man of affairs? Dr. Hook, in short, interprets reality in terms of instruments and derives the consequences. The result is a stimulating re-interpretation of metaphysical problems. But at the end one is left wondering at what can be done with a metaphor and as to the uses and limitations to the use of metaphor in philosophy.

I.L.G.S.

THE WORLD AS AN ORGANIC WHOLE. By N. O. Lossky, Professor of Philosophy in the University of Prague. (Trans. from the Russian by Natalie A. Duddington.) London: Oxford University Press. 1928. Price: 10s.

Synthesis is the order of the day in Philosophy. The explanation of parts is to be found in wholes; the analytic explanation of science of wholes in terms of parts gives us an abstraction that disguises truth. In all directions in the later thought we see the same trend. We have Smuts's "Holism," Whitehead's "Organic Mechanism," Lloyd Morgan's "Creative Evolution," and in Psychology the Gestalt theory. Lossky's "The World as an Organic Whole" is the latest manifestation of this tendency, and shows the conception of wholes at work, apparently independently, in Russian philosophy. The book is a product of two main conceptions: Of the organic whole, and of an Intuitional knowledge of the objective world that discards completely the older Epistemology. Separate independent elements from the atom upwards disappear under the view of the world adopted in this book. Mechanism is a false, though necessary, abstraction of science; even attraction and repulsion in the atomic world presupposes an organic system. We have become familiar with this point of view in Smuts and Whitehead. What is characteristic of Lossky is his comprehensive use of this conception to embrace the world as a whole, a system made up of lesser systems, each system being an interrelation of parts, and the system of the world an interrelation of systems. We reach here, again, that world of relations so dear to the older Idealist, with the notable difference that Lossky will have no intercourse with Subjectivism in any of its forms. Relations with him are objective facts. And this follows from Lossky's Intuitional theory of knowledge, which asserts an epistemological co-ordination between subject and object, in which neither is subordinate to the other, but in the act of knowledge remains independent, the subject *contemplating* the object immediately. Such consciousness, we are told, is the result of a peculiar non-causal relation between subject and object. It was the supposed causal action of the object on the subject which led to the confusions of the older epistemology, since it was there assumed that the subject could know only his own mental state produced by the object. The contemplated object must be immanent in consciousness, but it may transcend the subject of consciousness, forming part of a trans-subjective world. Thus a tree seen by me is immanent in consciousness, but is part of an objective world immediately contemplated. This theory has the difficulties in explaining the part played by stimulus, etc.—the stimulus with Lossky is apparently only the exciting cause of the contemplative act—but it certainly removes in summary fashion the confusions of the old controversies of Realism and Idealism. Can it be, one is driven to ask, that the older analysis of the act of perception has given us a false abstraction which has raised an impossible problem, just as, as some think, the opposition between mind and body since Descartes has raised a false problem resulting in our theories of Interaction and Parallelism? However that may be, for Lossky in the act of perception we are face to face with the objective fact. But the act of contemplation in which perception consists does not give us knowledge, which consists in that analysis of a whole which gives us the object in its relations. Relations and terms of relations are not independent of one another, but form together a whole, and relations as well as terms are objective facts. Lossky is emphatic on this point, and will have none of any theory of relations that is tainted with the subjectivism of Kant. He subjects Lipps's subjective theory of relations to acute criticism, having no difficulty in showing the weakness of his standpoint. Relations then, from the Intuitional standpoint, are necessarily objective. We are straightway told, however, that, though relations are objective, they are objective in a different way from sensuous fact. They are *ideal* realities, spiritual in nature. We are thus asked to believe in the spiritual reality of relations objectively existing in the world. This theory of relations is, then, no transcendental logical idealism which admits the objectivity of relations, but as having significance only for knowledge, but asserts a spirituality of objective relations that demands a substrate of Spirit in the universe from which they spring. Material nature is permeated with spirit. But, surely, Lossky's argument towards the spirituality of relations limps. If relations are objective and are given in one whole with their terms, why, one may ask, must they be conceived as spiritual? If the relation of distance between two points and their positions are equally objective facts, why in the first case is the fact spiritual and in the second, not? The relation of before and after in a temporal series is, as Lossky asserts, non-temporal, but that does not make it spiritual in itself. A relation is certainly non-sensuously apprehended, but it is rational or spiritual only in the sense that it needs a unitary relating mind to apprehend it. (We just note, in passing, Lossky's curious return to the idea of Substance in his assertion of substantial spiritual agents supporting his systems of spirit.)

We have then a world permeated by spirit, but this whole of spiritual relations leads necessarily beyond itself to the Absolute. But here, again, the reasoning seems insecure. Wherever there is a system, we are informed, there must be something beyond system. "A consistent working out of an organic view of the world leads to the recognition of a super-organic principle." But this is not quite self-evident. If such a system, it is asserted, were wholly self-subsistent, we should have to admit that each element was an independent entity conditioning the system and at the same time conditioned by it, and this is a contradictory result. But why? Is not this what we have in that very relation of individual to society with which Lossky himself compares the relation of the subordinate systems of the universe to the universe as a whole? Having got his Absolute, Lossky is faced with the old trouble that he cannot speak of the Absolute in itself except in negations. This merely means, however, that God is above Reason, above Will, above Personality, and this, again, does not prevent us from speaking of the Absolute in relation to the world as ground, as creative cause, as good, etc.

Space prevents any detailed discussion of Lossky's division of the world into his Kingdom of Harmony and of Enmity. In the heterogeneous material of the universe he distinguishes two kinds of opposition: Ideal, which involves no resistance, limitation or obstruction, as between the colour and scent of a flower, or between sadness and reverence in the soul; and Conflicting, as between two elements that are mutually exclusive and prevent each other from existing. In the Kingdom of the Spirit there is no conflict, but a universal interpenetrative harmony in which the limitations and negations of time and space and the material disappear. There exists only Positive Time, which involves no falling into the void of the past of its elements, no death, but an ever-increasing enrichment of the old by the new. In the Kingdom of Enmity, however, which arises from the mutual exclusions of self-affirming elements, we have the region of the material and of Positive-Negative Time, where the birth of the new involves the death of the old. Out of the Kingdom of Enmity man struggles to reach the harmony of the Spirit. Here we have something to which we can say neither yes nor no. There is a curious mixture of logic and mysticism in this interesting book, the exaggerated terms in which Lossky refers to Plotinus as the greatest of philosophers showing the strong tendency towards mysticism in his own mind. A word must be added concerning the clearness of Lossky's style and the excellent work done by his translator.

C.F.S.

MORALS IN REVIEW. By A. K. Rogers. London: Macmillan & Co., Ltd. 1917. Price: 15s.

There is a notable paucity of books on the history of ethical speculation, at least in English. The present writer can think of two only, those by Henry Sidgwick and R. A. P. Rogers, although we have been promised another from the "Library of Psychology, Philosophy and Scientific Method."

The volumes by Sidgwick and Rogers are both small; and while each is an excellent treatment and is packed with matter—that by Sidgwick especially so—this very circumstance makes their discussions summary and sometimes obscure. Perhaps their authors deliberately designed them to be "companions" merely to the study of the various ethicists in themselves: and this is all that any history can or properly should do. Even so, the companion volume needs to spread itself a little if it is to give ready illumination, and A. K. Rogers may have had this in mind in composing the present work. It is considerably longer than the two mentioned above, and this permits of something like adequate treatment of important men. Dr. Rogers' treatment is similar to that of his T. C. D. namesake in giving criticims in each case, but he also tries—on the whole with success—to appraise sympathetically the difficulties and conclusions of each thinker. And one is gratified to find a large slice of the book devoted to Greek Ethics, and a long chapter solely to Spinoza. (Why is Leibniz usually omitted in books on this subject?) The style of exposition is generally clear, but not sparkling; occasionally one has to slow down in order to grasp what is being said. Dr. Rogers, however, is to be commended for giving us a valuable review of ethical speculation, even though he denies that this is the character of his book.

A. C. Fox.

THE EPINOMIS OF PLATO. Translated, with Introduction and Notes, by J. Harward. Pp. 146. Oxford: Clarendon Press. 1928. Price: 5s. net.

This book, taken along with the discussion of the "Epinomis" in Professor A. E. Taylor's "Plato, the Man and His Work," should enable the student of philosophy at last to come to terms with Plato's later dialogues. Mr. Harward shows very clearly the importance of the doctrines expounded in this work and their close correlation with those of other late works, particularly the "Laws," and brings out the weakness of the objections commonly urged against taking the two dialogues together. And, though Greek scholarship may be required for an exact appreciation of the stylometric evidence, it is obvious that the case made out for Plato's authorship of the dialogue will be very hard to answer.

It is not so easy, however, to follow Mr. Harward in practically identifying the Athenian Stranger with Plato. The astronomical views referred to may certainly be taken as reflecting the work of the Academy, and the information thus gained is one of the advantages of studying the dialogue. But it would seem most natural to regard the general position outlined as that of "Socrates grown young and handsome." Plato, we know, thought that philosophy could not be put into a book, and for that reason wrote dialogues, not treatises. In discussing the interpretation of the dialogues, Burnet has argued strongly in favour of taking the views expressed by historical characters as substantially those they really held, but this is not to say that fictitious characters represent Plato. Accepting the view of Socraticism arrived at on Burnet's theory, we find so much of it in this last account of training in wisdom, that we may conclude that Plato regarded it as the proper approach to philosophy, as a doctrine of which the best had to be made before one was entitled to think that one had gone beyond it. But we cannot infer that Plato had not gone beyond Socraticism and even beyond the views of the Athenian Stranger.

At any rate, if we allow ourselves to be persuaded that Plato wished to say of *himself* that he had come "in the latter part of his life" to be acquainted with the real nature of incommensurables, we shall have to refer the "Meno," and by implication the "Phædo," to that period, and also to regard them as not genuinely Socratic. On the other hand, the conception of the universe as "a single harmonious system bound together by one natural bond" is a perfectly natural development, or even statement, of the Socraticism of the

"Phædo." And it is not going far beyond the Socratic politics to hold that, as all are not mathematical and philosophical enough to acquire an understanding of this system, the worship of the heavenly bodies will be useful in encouraging orderly behaviour in general, and, in particular, in giving a lead to those who are going to be thinkers. For, as in the "Republic," the mark of goodness and wisdom is order, of evil and error disorder.

In fact, the "Epinomis" appears to be a manual of advanced Socraticism. But Plato's belief in the value of such an exposition does not imply that he himself accepted the "reformed religion" whose social usefulness is being considered, or that he really thought that the philosopher, however far his astronomical and other studies might have gone, would still adhere to the "likely story" that the heavenly bodies are gods. When political purpose and dialogue form are taken into account, can we suppose Plato to have regarded "worship" as any part of the philosopher's attitude, unless it be understood merely as a sense of further discoveries to be made—a recognition that there are many problems which he has not solved, but that all have a solution? Further, as philosophical progress consists in the adoption and discarding of successive "likely stories" or hypotheses, a place, and an advanced place, in the series can easily be found for monism. But can we regard the author of the "Parmenides" and the "Sophist" as capable of accepting any form of monism whatever?

No doubt we can, if we accept Taylor's view that the "Parmenides" is a *jeu d'esprit*, and the criticisms of Socraticism which it contains invalid. But in that case Burnet's whole theory has to be revised, and Socrates again becomes a legendary figure. Accepting Burnet's arguments on these matters, we shall, I think, find the Athenian Stranger more Socratic than Platonic. That, at least, is the conclusion I have been led to by a study of this volume, which, on any view, one cannot but regard as notably advancing the discussion of the whole Platonic question.

JOHN ANDERSON.

HUMAN VALUES AND VERITIES. By Henry Osborn Taylor. London: Macmillan & Co. Pp. xiv + 282. 8s. 6d. net.

In this book the author attempts to give ' an estimate *raisonée*, analytical, topical" of the endeavour of the human mind to establish values and validities. The central thesis of the book is that values and validities are, or are created by, the functioning of human faculty. The book is mainly devoted to illustrating this thesis by giving examples of the establishment of values and validities in the course of history and in the various fields of human achievement—science, philosophy, religion, art, active life. These chapters give an interesting and stimulating survey of human achievement in these various domains.

The serious student of philosophy is likely to find the book disappointing on account of the vagueness of the treatment of the central conceptions of value and validity. It contains at least four distinct accounts of the nature of values and validities. (1) They are the *effects* of human faculties. (2) They are the very *functioning* of human faculty. (3) They *support* human functions; functions are *realized* in them. (4) They come as an interwoven and organic *response* to activity or function. The author seems to think that all these views are really reducible to, indeed are undistinguishable from, the second. "Human values and human functionings are convertible terms" (p. 210). But the fact is that every one of these views contains an element of truth, though each a different element which is only one aspect of the adequate conception which combines and reconciles them all. Faculty cannot function in the void, but only in a world which both responds to and is sustained by the exercise of faculty. Values are real characters of this world, and therefore, though realized only in experience, are yet objective.

From this point of view the distinction which the author suggests between values belonging to external things and events on the one hand, and human values, values for men, on the other, is untenable. External things are things as they are for men and have values which are values for men. True, he only makes this distinction in passing. But it is implied by the very title of the book; "human values and validities" (or, as the title says, "human values and verities") suggests that on the one hand there are values of other kinds, while on the other hand that human values are merely human. The fact is that all values are characters of the one objective world. If values were not such characters but were merely human, mere human appreciations, then they would not even be *human*—I mean they would not possess the universality which the term 'human' implies—but would be simply my appreciation or your appreciation and could claim no validity for anyone else. My appraisements of value can claim validity beyond my appreciation only because this is grounded in an objective world.

His conception of validities, which, though also functions of faculty, are distinguished from values by the fact that they correspond to fact, is open in addition to the objections which led logic to discard the correspondence theory of truth. Though much of his discussion of actual values and validities, particularly his discussion of the truth of poetry, far surpasses his analysis of these conceptions, it cannot supply the place of a satisfactory analysis.

The serious student will be equally disappointed by his conception of the "whole nature of man." Though he says that he "never cared much for any division of human mentality into faculties," and though he insists that the best value and the best validity must satisfy "our whole functioning and self-realizing nature," nevertheless, he tends to interpret the whole man simply as the sum of his faculties, without seeking to discover any underlying unity in these. Compare "It is not for us to pack ourselves into the strait-jackets of our reason. Why should we hand over our passions, impulses, intuitions to such a jailor?" (p. 20). The highest conception at which he seems to arrive is that of the whole man as a confederacy of functions, each of which is criticized by the others. We look in vain for any principle which plays a part similar to that played by the principle of positive non-contradiction in Bosanquet's "Principle of Individuality and Value."

His formulation of the distinction and relation between science and philosophy, though at times both clear and sound, at other times is vague and unsatisfactory. Particularly so is the suggestion that the one seeks its truth within the mind while the other turns to the outer world.

Despite these philosophical defects, the book is one which any cultured reader will find enjoyable. The style is throughout delightful. So are some of the incidental remarks—for instance, "Metaphysics is a personal equation" (p. 128). Some passages are really stirring; I remember particularly the account of Priam's interview with Achilles.

W.A.M.

BRAIN AND MIND, OR THE NERVOUS SYSTEM OF MAN. By Richard J. A. Berry, M.B., F.R.C.S., etc., Professor of Anatomy, Melbourne University. Pp. xii + 608. New York: The Macmillan Company. 1928. Price in Australia: 30s.

The main purpose of this book is, as Professor Berry says in his Preface, "to show that the manifestations of the healthy mind result from combinations of brain cells, and that if, from any cause whatsoever, these cells are deficient in numbers or are in an unhealthy condition, aberrations of the mind will probably result." With regard to the latter part of this statement there is probably no question of doubt, for if we regard the brain as the physical instrument of mind on the material plane, then it seems quite obvious that imperfect development of the brain will prevent normal development of the mind, and that partial destruction of the normal brain, how and whenever it occurs, will prevent or hinder normal expression of mind through brain. On the other hand, it seems that the author is taking too narrow a view when he states that "the manifestations of the healthy mind result from a combination of brain cells." Such a conception of mind is somewhat material and mechanistic, and will no doubt arouse a certain amount of criticism. The complete explanation of conscious, purposive endeavour and of aspiration demands more than mere functioning of organized matter. Such phenomena seem inseparable from the conception of the existence of something beyond matter, something which functions on a higher plane, and which we have faith is immortal. The author's deductions lead him, moreover, to have little sympathy with psycho-analysts and psycho-therapeutists generally. With regard to psychotherapy, we are no doubt groping somewhat in the dark, and no doubt many mistakes are made, but results show that we can hope for advance in this direction in the future. It is quite possible, and Professor Berry has brought forward no evidence that would tend to disprove it, that under certain conditions there may be abnormal manifestations of mind associated with a normal brain. If this is true, then psycho-analysts and psycho-therapeutists generally have a definite field for activity. After all, the most that neurology can ever achieve is a complete understanding or conception of the complex structure and mode of working of the nervous system as a material mechanism composed of units capable of picking up and transforming various forms of energy. No neurological technique or methods can do more than that.

Another statement which calls for criticism is that in which he says that "an animal's psychology or behaviour is entirely dependent upon its nervous system." Comparative neurology and the phylogeny and ontogeny of the nervous system clearly demonstrate that increasing complexity in the reactions of an animal to its environment is undoubtedly associated with increasing complexity in the structure of the nervous system, but there are other factors which have a great influence on animal behaviour, and of these, probably the most important is endocrine secretions. In the case of the nervous system we have definite channels for the conduction of impulses throughout the body, correlating the activities of its particular parts in response to stimulation, but in the endocrine system we have one that, under certain conditions and at certain periods, produces an influence which circulates throughout the whole animal organism, at one time profoundly affecting, and at other times providing a tonal background for behaviour. In discussing, for example, the phenomenon of awaking sexual desire at puberty and adolescence, the author relies simply on the mechanical stimulus resulting from increasing distension of the sex organs to explain the reactions produced at this period. He makes no reference to the fact that the whole organism, brain included, is bathed in a fluid which contains a graduated quantity of a powerful chemical substance produced by cells in the essential sexual organs which make the animal organism more sensitive to stimuli likely to produce sexual reactions, and which profoundly affect growth. Over-chemical stimulation during this period may cause violent reactions—physical, developmental and psychological—with the production of complexes which do not normally occur. Suitable environment and education can do a great deal in these circumstances to prevent catastrophe, and psychotherapy can do a great deal to break up abnormal complexes and bring conditions back to normal.

No doubt there are other opinions expressed in the book that will give rise to a certain amount of criticism from psychologists and others, but, when these are put on one side, a great deal remains which is of considerable value, and provides a source of inspiration not only to psychiatrists and psychologists in particular, but to educationalists and social workers generally. The author's emphasis on the necessity, on the part of these investigators, of having as thorough a knowledge as possible of neurology in order to make progress in the understanding of the phenomena of mind in health and in disease is well placed. To provide such a foundation, the author has devoted the first, and by far the larger part of his book to an account of the structure and function of the nervous system. Man is Nature's most recent and greatest masterpiece, and his brain is her most complex structural achievement, so in order to elucidate the principles of its construction and the significance of its various parts, the author has drawn on the facts of embryology and of comparative neurology in order to trace the ontogeny and phylogeny of the nervous system. Proceeding thus from the simple to the complex, the author has provided a most concise, well-arranged, easy and very readable exposition of a very difficult subject.

With regard to the actual subject-matter of this section, the author has embodied some of the results of most recent research, but preserves his remarkable lucidity of exposition by the elimination of all but most generally accepted neurological dogma. The illustrations are numerous, and, although many of them are seen in most textbooks of neurology, they are well chosen and, with a few exceptions, are fairly well reproduced. This neurological section of the book particularly, and it may be said that the book generally, is an index of the skill in teaching which the author could only have acquired by a lifelong practice of the art.

In conclusion, it may be said then, that although some of the author's deductions are probably matter for controversy, they are nevertheless of great practical utility, and will no doubt be of considerable service in helping to direct the activities of those for whom the book is primarily written.

HERBERT J. WILKINSON.

MOUVEMENT ET PENSÉE. By Dr. M. G. Peucesco. Paris: Félix Alcan 1928. Price: 12 francs.

This book is an interesting contribution to the study of a more than difficult and delicate question. Two important qualities appear: precision, keenness, even rigour of observation; fearlessness of hypothesis.

But quite praiseworthy qualities may be incompatible. And a metaphysical hypothesis grafted upon physiological observation constitutes a strange totality, which leaves you at least—pensive. Because, if we deal with pure physiology, is it not better to remain on scientific ground, to get a point of departure in the facts (or more exactly, in what we are able to observe in them)? And if we are in pure metaphysics, why not give a more general hypothesis and one more satisfactory to our intelligence? When Dr. Peucesco writes in the beginning of his Introduction: "It is by the agency of the nervous cell that the organized being comes into contact with the external world. Now the external world is made up only of vibrations . . ." (p. 5), is it not apparent that there are at least two postulates here, and that, if we cannot accept them, we shall be unable to follow the author in his investigations?

The problem Dr. Peucesco tries to solve is that of the relations between mind and brain, or, as he says in his conclusion, between spirit and body. He establishes in an interesting way that the nerve endings of the nerve cells, in the centres, have vibratory movements. He has made a good study of the phenomena of inhibition and also of inference, but in the latter he seems to be entirely hypothetical. Finally, for him the brain becomes "a colony of living beings, of which the nerve endings are animated by oscillatory and vibratory movements," and thought "the interior, direct intuition of the knowledge these living beings have of their own movements." The living being is thus the point of contact between matter and intelligence, and their relations are explainable by the movements of the nerve endings.

This book is certainly interesting; it may even be useful, though its usefulness is hampered by all the defects unavoidable in such a type of study.

C. H. BARBIER.

THE MEASUREMENT OF EARLY LEVELS OF INTELLIGENCE. Kenneth S. Cunningham. Contributions to Education, No. 259; Teachers' College, Columbia University. 1927. Price: 1·50 dollars.

From Galton's anthropometric norms to Cattell's Columbia mental tests was a great stride forward in mental testing. Binet's scale of promiscuous tasks, common to all social environments and ranged in order of age-achievement, was the next stage. His work enabled the factor of general intelligence to be tested with fair exactness and facility. The next development was the American Army alpha group point scale. Thorndike, one of its originators, followed up this task recently be measuring one specific aspect of intelligence, *viz.*, that of sheer altitude or actual quality of achievement as opposed to speed or number of tasks. For this purpose was formulated the C.A.V.D. point scale, comprising respectively tests in completion, arithmetical reasoning, vocabulary and directions. The scale attempts to measure ability from " absolute zero " approximately to genius.

The lower levels of the C.A.V.D. tests were standardized on adult imbeciles, and it was the purpose of Dr. Cunningham's work to test the validity of this lower range by their application to young children. The tests correlated 0·92 with the Binet tests, which is as high a result as might be obtained from a self-correlation. On the other hand, the Binet tests proved more interesting to the children—on account of the variety of their tasks—than the C.A.V.D. series, since these consisted of a series of progressive scales.

All psychologists engaged in mental testing have encountered and observed the characteristic " scatter " in the range of achievements of the mental deficient. It has been ascribed to associative factors—" breadth " factors of Thorndike. One of the main results of this work was to indicate differences between the chronological ages used in the C.A.V.D. scale, which the author attributes to the " wider store of experience of the adult."

A. H. MARTIN.

JOURNALS RECEIVED.

THE JOURNAL OF PHILOSOPHY. Edited by Professors Woodbridge, Bush and Schneider, Columbia University. Published fortnightly. 4 dollars a year.

Vol. XXV. No. 14. July 5, 1928. Ways of Being: Herbert Wallace Schneider. A Bird's-eye View: Dickinson S. Miller. No. 15. July 19. The Meaning of Meaning in Hollingworth's " Psychology of Thought ": Everett W. Hall. Medicine and Science: Alfred E. Cohn. No. 16. August 2. The Theory of Relativity and the First Principles of Science: F. S. C. Northrop. Kallen's Criticism, A Reply: Henry Nelson Wieman. No. 17. August 16. The Macroscopic Atomic Theory, A Physical Interpretation of the Theory of Relativity: F. S. C. Northrop. No. 19. September 13. Some Tendencies of Contemporary Chinese Philosophy: Yü-Shan Han. A Professor's Progress: Wendell T. Bush. No. 20. September 27. Santayana, Then and Now: Sterling P. Lamprecht.

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No. 32. April, 1928. Why Bentham? Editorial. Forensic Orthology, Back to Bentham: C. K. Ogden. Bentham on the Verb: Adelyne More. The Significance of Cicada Song: J. G. Myers and I. H. Myers. The Child's Early Discrimination between Sound and Speech: Mary Chadwick. Psychoanalysis and the Artist: Ernest Jones. A Theory of the Smile: A. M. Hocart. The Last Proust: E. Eales. No. 33. July, 1928. Debabelization: Editorial. Bentham's Philosophy of " As-if ": C. K. Ogden. Linguistic Fictions: Jeremy Bentham. The Classification of Fictions: George Bentham. The Evolution of Social Thought: I. D. Suttie. The Psychology of the Musico-Creative Process: Leonid Sabaneev. Gestalt *versus* Associationism: M. R. Harrower. A Lapse of Animism among a Primitive People: Margaret Mead. The Present State of Æsthetics: Curtis Bruen.

THE INTERNATIONAL JOURNAL OF PSYCHO-ANALYSIS. Official Organ of the International Psycho-Analytical Association. Baillière, Tindall & Cox, London. Price: 30s. per annum.

Vol. IX. Part 3. July, 1928. Gulliver Phantasies: Sandor Ferenczi. The Psychical Effects of Intoxication: Sandor Rado. The Problem of the Monogamous Ideal: Karen Horney. The Evolution of the Œdipus Complex in Women: A. Lampl de Groot. Some Infantile Sexual Theories Not Hitherto Described: Otto Fenichel.

INDUSTRIAL FATIGUE RESEARCH BOARD'S EFFORTS. H.M. Stationery Office, London.

No. 51. 1928. Price: 2s. 6d. A Study of Absenteeism in a Group of Ten Collieries. By H. M. Vernon and T. Bedford.

REVISTA DI FILOSOFIA NEO-SCOLASTICA. Direction and Administration at Milan, via S. Agnese, 2. Subscription: L. 28·30.

Vol. XX. Nos 4–5. La Storiografia nella cultura grece-romana e nel pensiero neo-cristiano ed in Benigno Bossuet: Silvio Vismara. L'educazione morale nel pensiero di Raffaello Lambruschini: Mario Casotti. Una lettera inedita del Peisse a P. Galluppi: Eugenio Di Carlo. La politica del Campanella: Romano Amerio. Nuovi studi di dottrine religiose.

ARCHIVIO GENERALE SI NEUROLOGIA, PSICHIATRIA E PSICOANALISI. Edited by M. Levi-Bianchini. Official organ of the Italian Psycho-Analytic Association. Annual subscription: 8 dollars.

Vol. IX. No. 2. July, 1928. Le alterazioni della scrittura nella paralisi progressiva, prima e dopo la malarioterapia: Eugenio De Angelis. Considerazioni neurologiche sullo sbadiglio e sugli stiramenti, con speciale riguardo alle loro relazioni con le variazioni del tono muscolare, unitamente ad osservazioni sulle ipertonie da lesioni extrapiramidali e da lesioni piramidali: L. Insabato. La psycoanalyse dans la crampe des écrivains: C. I. Urechia and G. Retezeanu.

THE AUSTRALIAN GEOGRAPHER. Edited by Dorothy R. Taylor and David G. Stead. Journal of the Geographical Society of New South Wales. 17 Bligh Street, Sydney. Price: 2s. (Issued free to members.)

Vol. I. Part 1. August, 1928. This is the first number of the Journal of this important new Society, founded under the leadership of the eminent geographer and ethnologist, Professor Griffith Taylor, who has just accepted a call to the University of Chicago. This number contains numerous interesting and informative articles by writers of authority, including Sir Edgeworth David and Professor Griffith Taylor.

LA PSYCHOLOGIE ET LA VIE. Edited by the Pelman Institute, 35 Rue Boissy d'Anglas, Paris. Published monthly. Annual subscription: 60 francs.

Vol. II. No. 3. Mars 1928. André Gide: P. L. Estève. La Vertu psychologique de la "Leçon de choses": L. Basso. Le Système de Philosophie des Hommes d'action: A. Metz. La Nolonté: L. Dugas. Les Impressions d'un Intellectual dans les Affaires: D. A. Toledano. Propos: Alain. Comprendre la Musique: B. de Schloezer. "Aujourd'hui et Demain": H. Ford. No. 8. Août 1928. Henri Delacroix. L'Effort: Etienne Souriau. Pourquoi travaillons-nous? I. Benrubi. Le Réveil volontaire à une heure fixée d'avance: L. Dugas. Etre politique, être diplomate: P. M.-O. L'Enseignement des Mathématiques: L. Landry. La Fatigue professionelle: Chr. Cornelissen.

WELFARE WORK. The Journal of the Institute of Industrial Welfare Workers. 29 Gordon Square, London, W.C. 1. Price: 5s. per annum.

THE MEDICAL JOURNAL OF AUSTRALIA. Sydney. Published weekly. Price: 1s.

This Journal frequently contains articles of great interest to those of our readers who are interested in Psychiatry or Psychological Medicine.

NOTES AND NEWS.

MELBOURNE UNIVERSITY PHILOSOPHICAL SOCIETY.

The Society has held several meetings throughout the year. In April the annual meeting was held, and the following officers were elected: Patron: Professor W. R. Boyce-Gibson; President: Acting-Professor Merrylees; Auditor: Rev. Father Ryan; Hon. Secretary and Treasurer: Professor Gunn; Dr. Cunningham, Miss Parker, Miss Brosnan, Mr. W. M. Ball, Mr. McCay.

After the adoption of the Report and Balance Sheet, Acting-Professor Merrylees read a Paper on "The Logical Significance of Participation."

In May the Society participated in the Congress, and had the pleasure of welcoming visiting delegates: Professor John Anderson, Professor Morris Miller, and Associate-Professor Lovell. (These meetings have already been reported.)

In June Mr. G. Atkins delivered a lecture on "The Problem of Evil."

In July the Society was fortunate in securing a lecture from Professor Schneider, Ph.D., Leipzig, a brilliant young German scholar who has been acting as Professor in one of the American Universities. Professor Schneider lectured on "Gestalt Psychology," and held the attention of a large audience while he expounded in a brilliant manner, and lucid English, the fundamentals of this Psychology. An interesting and stimulating discussion followed. Dr. Schneider was asked to deliver another lecture in August to the Society, but was prevented by a visit to South Australia from fulfilling this engagement.

Two of the Honour students in Philosophy read Papers at a Symposium in September on "Plato's Idea of Immortality." The students were Mr. McCay and Mr. Latham, who acquitted themselves well on this occasion.

The final meeting in October is to be addressed by a distinguished Graduate of the School of Philosophy, Mr. Norman Porter, B.A., who is engaged on a special study of Croce. He will read a Paper on "Croce's Æsthetic."

The Society is looking forward to welcoming Professor Gibson at its meeting in March, when it is hoped he will give an address upon his philosophical experiences in Germany.

An interesting programme has been drawn up for the coming year in which Papers will be read by Professor Agar, Professor Osborne, and Professor Gunn.

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Mr. A. C. Fox, Lecturer in Philosophy of the University of Western Australia, has been given the status of Associate Professor. There is some likelihood, too, of the establishment of a third course in Psychology next year.

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The Australian Institute of Industrial Psychology, which was founded in Sydney on August 16, 1927, on the lines of the National Institute of Industrial Psychology in London, has issued its first annual report. The report is very encouraging. But, though the Institute has paid its way, that is due to the honorary services of the Director, Dr. A. H. Martin. The work of this Institute is a national work and should be subsidized by the Government. Any subsidy granted would be repaid many times by the proper selection for a vocation, the elimination of fatigue and waste, and by the general improvement in working conditions. When money is forthcoming, the Institute will undertake necessary research. Professor W. S. Dawson, of the University of Sydney, is the Honorary Consulting Psychiatrist to the Institute. The subscription for ordinary members is £1 per annum. The subscription of foundation members is £10. The address of the Institute is Manufacturers' House, O'Connell Street, Sydney.

ANNOUNCEMENTS.

I.

ROYAL SOCIETY OF NEW SOUTH WALES: WALTER BURFITT PRIZE.

A prize, known as the "Walter Burfitt Prize," has been established by the Royal Society of New South Wales as the result of a generous gift to the Society by Dr. W. F. Burfitt, B.A., M.B., Ch.M., B.Sc., of Sydney.

The following conditions for the award of the prize have been adopted by the Society:

(1) The Walter Burfitt Prize shall be awarded at intervals of three years to the worker in Pure or Applied Science, resident in Australia or New Zealand, whose papers and other contributions published during the past three years are deemed of the highest scientific merit, account being taken only of investigations described for the first time and carried out by the author mainly in these Dominions.
(2) The prize may be awarded to two authors working in collaboration.
(3) The prize shall consist of a Medal and the sum of £50.

It was decided that the Australian National Research Council, New Zealand Institute, the Royal Societies of the various States, and other scientific bodies in Australia and New Zealand should be invited to submit the names and publications of workers whom they deem worthy of consideration, and that scientific workers generally should be invited to submit their publications directly, while the Royal Society might award the prize to a worker whose name had not been submitted to it.

It was decided, further, that the first award should be made in May, 1929, for work published during the three years ending on December 31, 1928, and that nominations and publications should be submitted to the Royal Society not later than February 28, 1929.

O. U. Vonwiller,
C. A. Sussmilch,
Hon. Secretaries.

Sydney, August, 1928.

II.

INTERNATIONAL CONGRESS OF APPLIED PSYCHOLOGY.

In Paris, from March 21 to 27, 1929, there will be held, under the ægis of the International Institute of Intellectual Co-operation of the League of Nations, an International Congress of Applied Psychology.

The following six sections are contemplated:

Section I.—General Theory, Methodology and History of Applied Psychology.
Section II.—Psychology applied to Education.
Section III.—Psychology applied to Business.
Section IV.—Psychology applied to Mental Therapy.
Section V.—Psychology applied to the Study of Social Relations.

The Committee is an influential one, and the General Secretary is Monsieur Paul Masson-Oursel, 35 Rue Boissy-d'Anglas, Paris.

III.

INSTITUT NATIONAL D'ORIENTATION PROFESSIONNELLE.

There has been established in Paris the National Institute of Vocational Orientation. The Committee of Direction consists of Messieurs J. Fontègne, Inspector-General of Technical Education, H. Laugier, Director of the Laboratory of Physiology applied to Mental Prophylaxis at the Ecole Pratique des Hautes Etudes, and H. Piéron, Professor at the Collège de France and Director of the Psychological Laboratory at the Sorbonne.

The Institute offers courses of instruction in physiology, pathology, psychology, pædology, political economy, technique of trades, organization, and awards a diploma after examination. The Secretary is Mlle M. Lichtenberger, Musée Pédagogique, 41 Rue Gay-Lussac, Paris.